DAILY METAL REPORTER
MONTHLY SUPPLEMENT

METALS

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In This Issue

STATE OF COPPER, LEAD AND ZINC INDUSTRIES
By SIMON D. STRAUSS, Vice President
American Smelting and Refining Co.

OUTLOOK FOR LIGHT METALS
By R. A. LEARNARD, Vice President
Aluminum Company of America

BRITISH METAL MARKETS
By L. H. TARRING
London, England

DOMESTIC METAL MARKET REVIEW

WASHINGTON REPORT

METAL STATISTICS

NOVEMBER
1960

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TWO LINE *Editorials*

A New York editor says that the United States Government "should be run on the same principles as a big bank." But do we really need 30 or 40 Vice Presidents?

* * *

A haberdashers' survey, it is reported, shows that the biggest men in the country live in Vermont and the smallest in Texas. Wouldn't you like to be present when some big Vermonter tells that to some littleTexan?

* * *

One Congressman says he is opposed to "excessive tariff protection." So is everybody else — but every man has his own private definition of excessive.

* * *

Every election provides shocking evidence of the increasing number of misguided simpletons who vote for the men we vote against.

* * *

Mr. Walter Reuther, says that labor union members "must wake up." Is it possible that those featherbed contracts may have encouraged too much sleeping?

* * *

As we understand it, after reading all the advertisements, the American automobile manufacturers are in a hot contest to see who can make the biggest little car.

Washington Report

November 18, 1960

THE major metal news out of Washington at the moment concerns speculation as to what President-elect John Kennedy and his new Administration intend to do about aid to the domestic mining and mineral industries. Few expect important policy innovations as far as depletion allowances and tariffs are concerned but some subsidy program might clear the Congress. It will be recalled that Mr. Kennedy said during the campaign that, if he were President, he would not have vetoed stabilization payments to small producers of lead and zinc. A bill to this effect perished on President Eisenhower's desk at the last session.

While it is uncertain as to what path proposed mineral aid bills will take in the forthcoming Congress, it is likely that legislation will be introduced similar to the ill-fated measure on lead and zinc subsidies offered by Rep. Ed Edmonson (Dem., Okla.). That measure would have authorized subsidy payments based on the difference between market prices and a price of 17 cents per pound for lead and 14.50 cents per pound for zinc to mines not producing more than 2,000 tons annually of each metal.

Other, further-reaching measures are also expected to be thrown into the Congressional hopper but thus far there is no indication as to how the incoming Administration will react. Promises to hard-pressed industries during election campaigns are not always translated into legislation when the candidates assume the responsibilities of their office.

Tariff Negotiations Slated

An indication as to how the Administration feels in reference to metal tariffs may be provided during the Geneva negotiations which get under way in January of 1961. The Secretary of State, incidentally, has announced details of a plan for increased participation by non-governmental representatives in the U. S. delegation.

It has been customary in recent years for the Secretary of State to appoint three or four private citizens to serve as public advisers on the U. S. delegations participating in the major meetings of the Contracting Parties to the General Agreement on Tariffs and Trade (GATT). These public advisers have been representatives of agriculture, industry, labor, and the general public.

The plan just announced provides for an increase in the number of public advisers to a total of twelve. The advisers will be appointed by the Secretary of State upon recommendation by the Trade Policy Committee. In addition, the plan provides for the designation by the chairman of the Trade Policy Committee of a substantial number of private citizens to be available in Washington as consultants to the committee and its member departments on questions arising in the course of the Geneva negotiations.

Hit Soviet Tin Plant Offer

The cold war crept into the metals sphere in this hemisphere when Soviet Premier Nikita Khrushchev offered a tin smelting plant to Bolivia. The United States has denounced the offer as an attempt to penetrate the Americas and exploit their people's hopes. The Bolivians are reported discussing whether to send technicians to Moscow to see what type of smelter would be provided.

Asked about the Soviet offer, Lincoln White, State Department press officer, said:

"This reported offer is apparently another attempt to penetrate this hemisphere and exploit the aspirations of the people of the American republics.

"Its impications are being studied.

"It is my understanding that Bolivian and foreign technicians have long been agreed that a tin smelter would be uneconomic and unfeasible for Bolivia at this time, which would make it appear that the Russians are working toward political rather than economic objectives."

The United States has been giving large amounts of economic help to Bolivia, whose chief natural resource is tin.

Mr. White said the United States is not going to offer a tin smelter to Bolivia to match the Khrushchev offer. He said what seems to be much more needed for Bolivia from an economic standpoint is a means of raising the unit volume of its tin shipments.

He said this would involve better facilities for sorting the ore. He declined to say specifically what Washington would offer as a means of improving facilities for Bolivian tin.

Revise Barter Listing

In another area of interest to the metal industries, the Department of Agriculture has revised its list of strategic metals and minerals which it will accept for stockpiling in exchange for surplus farm products from abroad under the barter program.

Cadmium was dropped from the barter list. Among the materials added were the following: Jamaican and Surinam type bauxite, bismuth, Chemical and metallurgical grade chromite, industrial diamonds, and chemical grades A and B of manganese.

Value of Stockpile

The cost value of materials in eight Federal stockpile inventories as reported by the Agriculture Department, General Services Administration and the Office of Civil and Defense Mobilization, on September 30, 1960, totaled $16,002,383,000. September activity in these stockpiles resulted in a net increase of $109,657,000.

Strategic and critical materials are shown in six inventories totaling $8,500,000,000, including the $6,100,000,000 national stockpile for which itemized detail is classified. Combined figures from the five other inventories show materials (in all grades and forms) leading in cost value as follows:

Aluminum, bauxite, etc., with 7,000,000 tons at a cost of $482,000,000.

Tungsten, with 84,000,000 pounds at a cost of $341,000,000.

Manganese (and ores), with 4,700,000 tons at a cost of $316,000,000.

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1960 Disappointing for

Copper, Lead and Zinc Industries

By SIMON D. STRAUSS, Vice President, American Smelting and Refining Company.

IN THE brief time allotted it will not be possible to give a complete report on the state of the copper, lead and zinc industries and you must forgive me, therefore, if I fail to cover some points which may appear to you of great importance.

Turning first to copper, in spite of some loss of output during the first quarter due to the carry-over of the strikes that began in August of last year, mine production in this country this year will apparently be about equal to the record rate of 1956 and 1957. Production outside the United States will set an all-time record, despite some labor difficulties in Chile. The political disturbances in the Belgian Congo have not as yet seriously interfered with production in that country. Output in Northern Rhodesia will probably be the largest ever and there has been a sharp increase in Peru where the Toquepala project went into operation as the year began.

Deliveries of refined copper to United States fabricators during the first eight months of this year have been only slightly in excess of the sum of domestic mine production plus the scrap intake of the primary refineries. Thus, for all practical purposes, the United States has this year been virtually self-sufficient in copper supply.

U. S. Net Copper Exporter

Indeed, during the three months of May, June and July, this country was a net exporter of copper to the extent of 20,000 tons. Some domestic producers, who had been selling to their domestic customers at 33c a pound, were selling metal abroad at substantially lower prices. Parenthetically, one might remark that when a foreign producer sells his metal in the United States at a price lower than he charges in his home market, this practice is often criticized as constituting dumping.

World-wide stocks of refined copper in producers' hands during the first eight months of the year increased by only 75,000 tons. This is about one week's production at the current rate of operations, not a large increase in a year when production is setting records. As demand in the United States has been only of moderate proportions, the relatively modest rise in producers' stocks is due to extremely heavy deliveries of copper to foreign consumers. For the first eight months these deliveries averaged about 190,000 tons a month. This compares with an average of slightly under 140,000 tons a month in 1959. Although business abroad is booming, it is hard to believe that it has improved by 35 per cent over last year. One may conclude, therefore, that, even though producers' stocks have not been greatly increased, there has been a major increase in copper inventories in the hands of foreign consumers. Stocking of reserve supplies of copper is a normal reaction to the uncertainties which have prevailed all year regarding the continuity of production in Central Africa and in Chile. Nevertheless, the accumulation of a substantial inventory in the hands of the consumers must be considered as a decided brake on any future advance in price.

Lead, Zinc Quotas

Lead and zinc have been under quota restrictions for more than two years now. The report of the Tariff Commision, sent to the President at the end of September, indicates that they will continue for some time ahead. With a limitation imposed on imports of lead and zinc into the United States, had there been a strong demand for these two metals from domestic consumers, prices of both metals could well have advanced. However, the first nine months of this year have been characterized by absolutely stable markets with lead remaining unchanged at 12c and zinc at 13c a pound. This has been due to the mediocre rate of buying by consumers. The current lead price is about unchanged from last year's average; the zinc price is 1½ cents higher than in 1959.

Mine production of both lead and zinc in this country, as has been stated on frequent occasions in recent years, is determined almost entirely by the level of domestic prices. Zinc mine production, when not interrupted by strikes, has been running at somewhat higher levels this year than was the case in 1959. Lead mine production shows little change.

Refined Lead Stocks Rise

Despite the limitations imposed on imports by quotas, stocks of refined lead in the United States increased by 19,000 tons in the first eight months of the year and stocks of zinc increased by 48,000 tons. As the rate of refined production of both metals has been reduced by labor difficulties and as a seasonal upturn in consuming demand seems probable, stocks should trend downward during the remainder of this year and little change will be shown for the year as a whole.

Taking the entire world outside the Iron Curtain area, the trends are somewhat similar. The International Lead-Zinc Study Group, which met last month at Geneva, estimated that in the first half of 1960, producers' stocks increased by 54,000 metric tons of lead and 45,000 metric tons of zinc. For the second half of the year, the estimates of the Group appear to indicate a decline of 33,000 tons in lead stocks, but an increase of 29,000 tons in zinc stocks. These figures include the changes within the United States as well as elsewhere. The available data show that deliveries of lead to fabricators outside the United States are likely to be about 5 per cent higher in 1960 than in 1959. This year's gain in deliveries of zinc to consumers outside the United States is estimated at 10 per cent. The rise in world stocks, therefore, reflects higher production rather than a low level of demand outside this country.

1960 Disappointing

To sum up, within the United States, 1960 — a year which opened amid almost general expectation of rising volumes and buoyant prices for the non-ferrous metals — has been a great disappointment. In this respect, copper, lead and zinc are by no means unique. In fact, compared with their sister metals — steel and aluminum — they have not done too badly. Taking the available data for the first seven or eight months and estimating demand during the fall and early winter in the light of present trends,

Address presented before American Mining Congress, Las Vegas, Nev., Oct. 13, 1960.

deliveries of refined copper to domestic users will be about as great this year as in 1959; deliveries of zinc from domestic smelters to their customers in this country may be off 5 per cent; and shipments of refined lead to United States consumers will be down about 7 per cent to 8 per cent.

You will note that I have spoken of shipments and deliveries and not of consumption. This is an important distinction which, unfortunately, is not always made by commentators discussing our industry. The fact is that shipments to consumers and use by consumers are rarely equal. It is the rule rather than the exception that our customers are adding to or reducing their inventories of metal on hand, depending of course on what they think of their own sales prospects and prospective trends in the prices of metals. Our customers are for the most part, those raw-material processors that can best be described as fabricators. Their customers, in turn, are the manufacturers. And the maufacturers, in turn, have as their customers the distributors and contractors. And finally, at the long end of this chain of commerce, are the retail outlets and the eventual consumers.

Shipments Determine Income

Betwen the miners, smelters and refiners on the one hand and the retail outlets and eventual consumers, therefore, there is little or no direct contact. The vast reservoir of materials in process, in transit, and in inventories is constantly changing in amount. When this reservoir is expanding by virtue of expectation of higher prices, the industry's sales may rise even though actual consumption of copper, lead and and zinc is static. It is the metal we ship and not the metal that is consumed that determines the level of our income. And when lower prices are expected, even if actual consumption is good, our sales may suffer because our customers are reducing their inventories.

These observations are, of course, not original, but they bear repetition at this time in relation to the metal market in 1960. The available data indicate that during the current year the gross national product will set a new all-time record. The country is generally considered to be exceptionally prosperous; the standard of living is high; and unemployment, until recently at any event, has been confined to specific areas and specific industries. And yet sales of copper, lead and zinc to consumers in the United States are running along at about the level that has characterized the entire last decade. Maximum U. S. consumption of virgin copper was in 1956 and of lead and zinc in 1955. With the population of the country rising by about and and one-quarter per cent per annum, any industry that holds its own should be expanding volme by from twelve to fifteen per cent every ten years. Why has this no happened to copper, lead and zinc within the United States? Outside this country, as my comments have indicated, volume is expanding substantially, but here it is static.

Competition From Scrap

Many of you appear to be under the impression that the basic problem of the nonferrous metal mining industry is the competition of low-cost imports from outside our own boundaries. This is an unfortunate over-simplification that has too long attracted the attention and time of too many people. The domestic miner of copper, lead and zinc has other competitors than the foreign miner.

First, there is the inexorable recovery of metals from scrap. In copper and lead, the quantities of secondary metal re-entering the market each year are equal to or in excess of the volume of imports. In zinc, the quantities are smaller, but significant particularly in relation to the brass and alloy market.

Second, there is the competition of other materials. Aluminum is usually named as the offender, but today plastics are at least equally important. Glass fibers, titanium oxide, asbestos, synthetic rubber, and a whole host of chemicals are chipping away at sections of our market and the raising of tariff barriers or the imposition of quotas will not stop this erosion — indeed may serve to increase it.

Technological Trend

Third, there is the whole trend of technology which is developing quicker, lighter, and more efficient ways of doing business. Twenty years ago, most of us would have come to Las Vegas by train; today the majority have flown here. One modern jetliner will carry a much larger number of people in a week's time from Las Vegas to New York than any passenger train. It will cost as much. But it uses perhaps 5 per cent as much in the way of raw materials. Twenty years ago a defense budget the size of the current one would have meant an enormous fleet of warships, tanks, propellor-driven planes. Today the bulk of our defense dollars are going into costly missiles, atomic-powered subs, and globe-circling satellites. These are expensive weapons built by high-paid labor but they do not require much in the way of metallic raw materials.

And even in those applications where the amount of raw material required per unit is as gerat as it used to be — as for instance in the case of the lead storage battery — in many instances modern technology has so improved the product that over-all demand is reduced. The average life of an automobile battery has increased by 50 per cent in the last fifteen years so that instead of 38,000,000 replacement batteries being needed annually to maintain our present fleet of cars and trucks, we get along with 25,000,000 batteries.

Demand for Service

Fourth, the balance between public demand for goods and services appears to be shifting away from goods and towards services. A large proportion of our total population now is in the under 20 or over 65 age brackets than was the case during the first half of this century. This means a larger proportion of the gross national product is devoted to education, to medicine, to travel, and to recreation. In 1870, of the total number of persons gainfully employed, 75.9 per cent were in the categories of agriculture, forestry and fishing, mining, construction and manfacturing. In 1950, this had dropped to 45.5 per cent. That means the service categories — including transportation, trade, finance, government, professional services, and personal and domestic services had expanded from only 24.1 per cent to 55.5 per cent.

Based on the number of households now in existence, most of the durable hard goods, automobiles, refrigerators, vacuum cleaners, washing machines, plumbing goods, and many other categories — appear close to the saturation point. This is not to deny that there is an excellent replacement market — because there is a very good one. And looking ahead a few years, as the post-war baby crop reaches the age of marriage and setting up independent households, a new expansion of market can be confidently expected because the number of family units will be greater.

Demand Outside U. S.

Earlier it was pointed out that while domestic demand for copper, lead and zinc has been static, demand outside the United States has been growing. The standard of living outside this country is in general so much lower than our own, at least in terms of durable consumer goods, that the saturation of demand for such products as automobiles and refrigerators is still a long way off.

(Continued on Page 10)

Space Age Forecast

Light Metals Are Moving Forward

By R. A. LEARNARD, Vice President
Aluminum Company of America

IT IS an honor to have this opportunity to represent the light metals industry here at the 1960 annual meeting of the American Mining Congress. Since this year marks the beginning of a new decade, it seems appropriate to call attention to the increasing size of the light metals family. Aluminum, of course, is still "head of the household," but under the same roof we now have, in addition to magnesium, two other fast-growing members — titanium and beryllium. I would like to summarize the situation in these metals before outlining developments in aluminum, the one with which I am most familiar.

Magnesium

The magnesium industry in 1960 has generally continued to show strong recovery from the 1957 cutbacks in military aircraft procurement. Though defense items still dominate the structural uses of magnesium alloys, their particular combination of properties are encouraging many new consumer applications in such fields as electronics, machine tools, printing and material handling equipment, office furniture and luggage.

Production of primary magnesium in the first half of 1960 was at the annual rate of 39,500 tons. This represents a 27 per cent increase over 1959 but is susbtantially less than anticipated consumption of 52,000 tons, up 9 per cent over last year. Producer inventories are expected to absorb this difference.

An important development during the past year was the start up in late 1959 of a second commercial producer of primary magensium. In general, the outlook for this metal is better now than it has been for several years.

Titanium

The same switch in defense requirements that adversely affected magnesium was also a serious setback for titanium. Recently, however, both new military needs and new commercial markets for titanium appear to be opening up to offset this loss. Included are the chemical procesing industry, high-speed graphic arts equipment, comemrcial jets and military hardware.

Reflecting these developments, titanium ingot output of 7.3 million pounds in the first half of 1960 equaled last year's total production, and shipments of mill products in the first half zoomed to 4.2 million pounds — 70 per cent more than the 1959 total. With a favorable price trend and eight producers "working over-time" to improve production techniques, titanium appears to be on the threshold of a substantial growth period.

Beryllium

Beryllium is finding growing applications in the aero-space field. It is still an expensive metal at around $70 per pound, but increasing demand and technological progress are expected to lower prices in the future. Other uses include electronics, metallurgy, automotive parts, aircraft, missiles, and nuclear energy devices.

During the year, "significant" finds of beryllium ore were reported in Western United States. Since most ore is now imported, an economical domestic source of ore could have an important bearing on the metal's competitive position. Studies are under way to determine the commercial value of these newly discovered deposits.

Because of competitive factors in the industry, production figures are not released by the government, but output this year is expected to reach record levels. The outlook for the two producers is for a continuation of the trend toward increased use of the metal, its alloys and compounds.

Aluminum Capacity

Turning now to aluminum, the year 1960 finds this fourth and senior member of the light metals family still building for future growth as it has during the past decade. In that ten-year period, primary aluminum production capacity in the U. S. has more than tripled in size — from approximately 743,000 tons to its present 2.4 million tons — and Canadian capacity has increased from 500,000 tons to a total of 878,000 tons. North America now has the capacity to produce 3.3 million tons of primary aluminum a year.

In the same period, the number of domestic producers increased from three to the present total of six, and a second producer began operations in Canada. The number of non-integrated fabricators of aluminum mill products in both the U. S. and Canada also increased substantially.

For the domestic industry, the past year has been a period of adjustment to this rapid expansion and also to a variety of other recent developments. These include the termination of major government stockpile contracts and a combination of economic factors — such as the 1957-58 recession, last year's steel strike, and this year's business "plateau" — that have tended to keep demand from increasing at its long-term growth rate. These developments have prevented the industry from making full and profitable use of its expanded capacity. The result has been an oversupply of metal and heightened competition for aluminum markets — a competitive situation accentuated by widespread price cutting. The outlook, however, remains favorable for a resumption of the projected upward trend in demand.

Bauxite and Alumina

In the area of raw materials, this rapid growth of the industry has required a substantial expansion of bauxite mining and alumina production. Since domestic deposits of high-grade ore are limited, the industry now imports more than 80 per cent of its ore from extensive deposits in the Caribbean Islands and South America. Imports during the first half of 1960 totaled approximately 4.4 million long tons, a new six months' record.

To process these increasing quantities of bauxite, domestic producers have ben expanding existing alumina plants and building new ones. During 1959 almost 1 million tons of new annual alumina capacity was brought into production, increasing domestic capacity 25 per cent to a total of 4.9 million tons. An additional 375,000 tons is under construction.

In this connection, Aluminium Limited recently announced plans to try out a process for converting bauxite directly into metallic aluminum. Di-

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Address presented before American Mining Congress, Las Vegas, Nev., Oct. 13, 1960.

rect reduction processes in the past have not proved commercially feasible, but this new effort will of course be watched with considerable interest.

Total Aluminum Supply

Total U. S. production is expected to break through the 2-million-ton mark for the first time this year, reaching an estimated 2.1 million tons, an 8 per cent increase over last year's 1.95 million tons. Total domestic supply of aluminum should show a net increase of perhaps 3 per cent, rising from 2.65 million tons last year to about 2.7 million tons in 1960.

Demand for aluminum products is not expected to achieve first-of-the-year predictions, but over all, 1960 will be a good year. Shipments of aluminum products to consuming industries will approach last year's record 2.48 million tons, so that at the very least the second highest shipment year in history is assured.

New Uses Promoted

The relative sluggishness of U. S. metal markets during the past six months, though offset by record exports of primary metal, has added to a general squeeze on profits. To help counter this, the industry has continued to emphasize research and development and to aggressively promote new uses for the metal.

In the automotive industry, for example, the air-cooled, aluminum engine in Chevrolet's 1960 Corvair accelerated the trend to lightweight power plants in cars. In the building and construction field, the industry introduced a variety of colorful new sheet and siding products, most of them aimed at the fast-growing residential housing market.

In the electrical field, aluminum transmission towers were important news this year, and developments in military and space-age hardware produced several "exotic" aluminum applications.

Years of research and intensive selling efforts resulted in significant breakthroughs during the year in the field of aluminum containers, an important potential mass market. A stand-out in this connection was the citrus industry's acceptance of aluminum containers for frozen concentrates.

Overseas Facilities

Added to these activities here at home, important developments have also taken place abroad. Within the past few years, there has been a marked trend on the part of the American producers to build facilities overseas or to establish affiliations with firms in other countries. In part, this trend reflects an awareness of the potential of relatively undeveloped foreign markets, particularly in a period when U. S. smelting capacity is more than is needed to supply domestic needs.

Significant in this connection is the fact that the foreign market potential for semi-fabricated aluminum mill products made in the U. S. is currently threatened by the unfavorable import-export pattern existing between the U. S. and other industrialized countries. One of the major reasons for this trend is the fact that major foreign markets for U. S. aluminum mill products at the present time are concentrated in a small number of countries, primarily in Europe, which have lower prices for their own products, lower wage rates, and stiff tariffs against U. S. aluminum products. The U. S. hope to have the lowering of tarif barriers considered during the negotiations currently under way through GATT, the international trade organization. Regardless of the outcome, it appears certain that aluminum markets abroad will continue to play an important role in the growth of demand for U. S. metal.

In general, then, the state of the light metals today is one of dynamic forward movement. Each has built a base from which to make dramatic gains in a period of bewildering advances in space and nuclear energy applications. Everywhere there are fresh signs of increased emphasis on "light metals for a fast-moving age."

Copper, Lead and Zinc

(Continued from Page 8)

Competitive materials have less adversely affected the markets for lead, zinc and copper abroad, partly because foreign manufacturers are slower to change traditional designs than are those in this country and partly because the price relationship abroad between the older metals and the newer materials is more favorable to the older metals. As the economies of other countries attain the broad scope of our own, trends similar to those we have experienced may well develop.

Returning to the situation in this country, it seems that we much recast ideas previously held about the relationship between domestic demand for copper, lead and zinc on the one hand and the general level of business activity on the other. The two do not inevitably follow parallel courses. And when the trends diverge, as they do now, it is a mistake to think that the situation arises solely from the facts of foreign competition. Our problems are more basic than that.

This statement of the situation facing the copper, lead and zinc industris is not intended to be pessimistic, but rather to analyze it in realistic terms. We must come face to face with the hard necessity of developing a secure basis, both on economics and on technical considerations, for the sale of our metals. Then the use of these products can well resume the former pattern of growth. Through the research work being undertaken by the Copper Products Development Association, the Lead Industries Association, and the American Zinc Industries, the first steps in this direction are being taken. The support of the entire industry for these efforts is essential.

Potential Profit in Research

You may recall that two years ago, at San Francisco, I pointed out the desirability of developing the use of copper, lead and zinc in our home grounds—here in the Western Stataes where a large portion of the production of these metals originates. Three recent releases of the American Zinc Institute point out specific places where, for instance, more zinc can be used if the mining industry will only turn sales promoter. Galvanized steel is now being used or considered for automobile license plates by four states—of which only one is a zinc producer. A. Z. I. has unearthed the fact that in a Dutch coal mine underground rails are being galvanized as a means of limiting corrosion by acid mine waters. This has obvious application in our own industry. And just within the last few days, A. Z. I. announced that a large order had been placed on a test basis for galvanized highway guard rails in one of the Eastern States. If the state mining associations and the individual mining companies will assist in promotion along lines such as these, addition markets can be developed. There is more potential profit in research for new uses and in promotion of markets than can be found in lobbyig for government aid in Washington.

NICKEL AIDS SPACE VEHICLES

Nickel or nickel alloys are used in nearly all components of space vehicles — in the electronic equipment, in the skin where toughness at very low temperatures or strength to resist the effects of aerodynamic heating is needed, where corrosion-resistance is required and in those portions of the rocket engine which are subjected to high temperatures.

COPPER UNDERGOES TRANSITION PERIOD IN U. K.; WORLD CONSUMPTION OUTSIDE U. S. NOT TOO BAD

Better Sentiment in Tin—Malayan Operations Seen at Higher Level by End of Year; Speculative Interest in Lead; Zinc Use Held Reasonable

November 8, 1960

IN some ways this report which normally covers October but takes cognizance of the first few days of November, considers what may be called a period of transition.

For most of the time copper prices in London, and indeed elsewhere in thet world where they fluctuate flexibly, reflected what might almost be characterized as a persistent refusal to pay any attention to the various bullish factors that were current.

This, however, was quite correct and showed the market acting in a way to which even its detractors could not possibly take exception, namely by reflecting preponderantly, if not exclusively, basic considerations of world supply and demand. Apart from the U. S. A. where the consuming industry is still operating at most disappointing levels — brass mills for instance rating only about 55 per cent of capacity—world consumption is not making too bad a showing at the present moment.

U. K. COPPER STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics, U. K. stocks of refined copper at the end of August increased to 89,809 tons compared with 77,918 tons at the end of July, and only 56,257 tons on June 30th. Consumers held 42,195 tons on August 31st against 33,524 tons on July 31st. Blister stocks at the end of August showed a slight increase at 20,785 tons compared with 20,165 tons at the end of July. Production of refined copper in the United Kingdom in August amounted ot 17,096 tons compared with 13,330 tons in July. Of the total, 9,076 tons were primary refined (7,004 tons in July).

August copper consumption was 49,100 tons against 46,306 tons in July. Details are given below:

Unalloyed Copper Products	Aug. 1960	Jan.-Aug. 1959	Jan.-Aug. 1960
Wire*	17,388	139,664	177,004
Rods, bars and sections	1,515	12,409	13,564
Sheet, strip and plate	4,084	36,926	39,645
Tubes	5,138	41,921	46,898
Castings and misc.	650	5,200	5,200
Alloyed Copper Products			
Wire	1,531	11,191	13,791
Rods, bars and sections	12,408	87,068	107,409
Sheet, strip and plate	7,483	64,629	76,669
Tubes	1,319	13,969	15,003
Castings and misc.	6,999	47,478	57,210
Copper sulphate	605	24,646	19,281
Total all products	59,120	485,101	571,674
Copper content of output	49,100	394,297	470,026
Consumption of refined copper†	38,055	294,412	358,686
Consumption of copper and alloy scrap‡ (copper content)	11,045	99,885	111,340

* Consumption of H. C. copper and cadmium copper wire rods for wire and production of wire rods for export.
† Virgin and secondary refined copper.
‡ Consumption of copper in scrap is obtained by the difference between copper content of output and consumption of refined copper, and should be considered over a period since monthly figures of scrap consumption are affected by variations in the amount of work in progress.

By L. H. TARRING
London. England

Certainly this is true of the U. K. and most of Europe. In the U. K. the full August figures show a continuance of progress over 1959 and later in October advance totals were given for September which showed that the rate of activity was still substantially better than a year ago. Indeed the last mentioned figure was itself one of the factors which helped to catalyze a better sentiment towards copper in London at the very end of October.

The point with which the market was obsessed was, of course, the very heavy exces rate at which production has been exceeding consumption all this year, but particularly in recent months; and it almost seemed as though dealers had ears for no other news than the producers stocks published by the Copper Institute. However, copper can be relied on to show a changing face and as the month progressed not only did the strike at Chuquicamata obtrude more forcibly upon dealers' consciounes by the very fact of having lasted so long (and longer than they had foreseen) but it also adjusted the basic world supply/demand ratio, because Chuquicamata is one of the world's biggest mines.

At the time of writing production lost from Chuquicamata alone reaches 30,000 tons, and the relationship of this sizeable lump of copper to other factors to which the market seems to have paid more attention in the past has already been pointed out.

It is for instance equal to the best part of 10 per cent of Chuquicamata's own output — and 10 per cent is an amount by which a number of responsible producers have already cut, or sought to cut, their output in an effort to balance the basic position. Indeed, one thing that can be said about production lost through a strike is that there is no arguing about the metal not being there. Sooner or later force majeure notices are provided instead.

With the voluntary restrictions announced by various producers there is always the possibility of studying the situation to see whether the announced intention does not look more restrictive than the actual output figures eventually show.

Amongst the items of news in October of a bullish nature which did not perhaps receive a very full mede of attention was the announcement by Union Miniere that copper production in the Congo was being reduced by 10 per cent. While it is true that this news needs to be viewed with the caution alluded to above, it is nevertheless a rather remarkable fact that it was possible for this announcement to be made at all, and it must be taken as reflecting continued strength in the hold which the Belgian company has of the situation in the former African colony.

Perhaps this thought entered into the fact that the market was so little impressed by the news, but basically the news was tempered by the overriding consideration of the basic statistical position. One of the odder features of the copper market at the time of writing is that there is

U. K. TIN STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics, United Kingdom production of primary tin in August showed a slight increase at 1,907 tons against 1,894 tons in July. Secondary output remained the same at 18 tons. Stocks at the end of August showed a small decline at 11,771 tons compared with 11,797 tons the previous month. Consumers held 1,405 tons against 1,413 tons in July.

U. K. tin consumption in August amounted to 1,696 tons — an increase of 58 tons over the figures for July. Details are as follows::

	Aug. 1960	Jan.-Aug. 1959	Jan.-Aug. 1960
Tinplate	822	6,289	7,569
Tinning:			
Copper wire	36	356	319
Steel wire	7	68	72
Ohter	65	513	535
Total	108	937	926
Solder	148	1,437	1,335
Alloys:			
Whitemetal	257	1,959	1,954
Bronze & gunmetal	174	1,311	1,617
Other	38	280	308
Total	469	3,550	3,879
Wrought Tin*			
Foil & sheets	18	210	180
Collapsible tubes	15	148	175
Pipes, wire & capsules	3	25	22
Total	36	383	377
Chemicals and other uses†	113	934	1,006
Total al ltrades	1,696	13,530	15,092

* Includes Compo and "B" metal
† Mainly tin oxide and tin compounds.

AVERAGE BRITISH PRICES FOR COPPER, TIN, LEAD, ZINC

(Per Long Ton)

Mean of Bid and Asked Cash Quotation at Close of Morning Session on London Metal Exchange

	COPPER			TIN			LEAD		ZINC	
	Cash	3 Months	Settlement	Cash	3 Months	Settlement	Current Month	3rd Following	Current Month	3rd Following
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1960										
January	259 5 3	246 8 9	259 12 0	791 7 6	787 11 0	791 14 0	74 15 8	74 10 6	94 11 5	91 14 11
February	263 17 5	245 17 6	264 5 0	792 7 5	790 3 10	792 15 3	73 17 3	73 15 6	88 17 2	88 18 5
March	253 5 4	237 14 10	253 11 4	787 11 0	786 15 0	787 17 10	76 5 4	75 7 4	90 3 2	88 17 12
April	262 2 1	244 15 0	262 8 5	790 11 4	785 5 0	790 18 11	77 10 6	76 11 5	92 8 7	89 15 11
May	248 4 8	243 0 3	248 9 7	785 1 4	784 0 0	785 7 9	77 8 3	76 16 6	92 1 11	91 9 1
June	250 15 0	244 2 6	250 19 3	793 5 0	789 3 4	793 11 5	73 7 6	74 0 8	90 11 11	90 3 10
July	254 11 7	246 19 5	254 16 11	812 10 3	808 9 9	812 16 8	71 4 10	72 0 7	90 4 8	89 15 11
August	254 3 2	243 14 7	245 5 11	801 12 3	803 10 3	802 0 11	70 19 0	71 7 1	87 8 7	87 9 2
September	234 14 1	235 5 3	234 16 7	804 18 8	802 15 8	805 7 3	69 18 11	70 4 11	87 2 9	86 8 11
October	222 4 8	224 1 5	222 7 2	804 7 2	798 2 2	804 14 9	67 5 0	68 13 7	87 18 3	86 12 5

now a distinct though subdued undertone of better sentiment towards the metal despite the fact that in the U. K., particularly the motor industry — that fatted calf of modern economic systems — has undoubtedly entered much more competitive conditions and is reducing its intake of raw materials rather savagely in one or two directions. It is particularly interesting that U. K. offtake continues at a very creditable level when there remains in the background a Government squeeze on credit which is a good deal more than technical.

Better Sentiment in Tin

Tin is sharing with copper a rather better sentiment although in the case of tin this may be said to be slightly more deep rooted.

Day to day movements on the London market — even movements of quite noticeable size — are not necesarily a quick guide to the market's basic attitude to the metal as tin is suffering from the thinness of the London market, and prices, especially for the nearby position, are influenced by at times quite small considerations affecting supplies.

The main factor which underlay the progressive improvement in sentiment and correspondingly in the average level of prices, was a progressive realization that the threat that extensive stocks of tin in ore would be offered to the Malayan smelters by the Malayan miners, once there were no restrictions, was more apparent than real. Various deductions had been quite reasonably made from published statistics, but some of the necessary background information was perhaps inadequately clearly understood.

In particular quite a few people undoubtedly omitted to subtract the stocks of tin in ore lying with the Malayan smelters which came from Indonesia, and which would produce tin already committed to consumers of Indonesian metal. Moreover it was not adequately appreciated that the Malayan mines would adopt so responsible an attitude to the possible consequences of their unloading stocks.

In the event the Malayan miners have been extremely judicious in their releases being also favored with a very healthy rate of demand on the smelters there, which has not called for much heavy discipline anyway. Moreover, there is always the old problem of adjusting mining operations as fast as market conditions, and it is generally believed that if there were a 100 per cent quota for the current quarter of 1960 (as indeed many people anticipated in advance of events) Malayan producers would, at the time of writing, be demonstrably underproducing, although perhaps not underexporting.

As it is, producing operations in Malaya are increasing in number daily and it may well be that by the end of the year the rate of operations there will have returned to a higher level. The end of the year, however, will fall the best part of a month after the Tin Council has had to take its decision on first quarter supply and demand.

However, the present climate of thought is that further freedom, or at any rate purely nominal restriction, is likely to be decided on. The fly in the ointment on the demand side remains the U. S. A. where steel industry activity, including tinplate remains at a level about which the kindest thing that can be said is that it ought to improve as soon as the

(Continued on Page 14)

U. K. LEAD STATISTICS

The British Bureau of Non-Ferrous Metal Statistics reports that U. K. stocks of lead at the end of August totaled 51,623 tons of imported refined and 7,972 tons of English refined, against 46,329 tons and 6,740 tons respectively at the end of July. Production of refined lead also showed an increase over last month's figure at 6,494 tons (5,959 tons), while consumption too, was up at 28,735 tons against 27,913 tons in July. August consumption was as follows:

	Aug. 1960	Jan.-Aug. 1959	Jan.-Aug. 1960
Cables	6,486	61,135	62,245
Batteries — as metal	2,903	18,977	26,337
Battery oxides	3,086	17,438	23,562
Tetraethyl lead	2,355	15,508	16,818
Other oxides and compounds	1,443	16,782	18,030
White lead	559	5,166	5,301
Shot (incl. bullet rod)	448	2,510	3,708
Sheet and pipe	6,066	44,127	49,072
Foil and collapsible tubes	250	2,273	2,765
Other rolled and extruded	693	4,346	5,605
Solder	1,244	9,478	10,562
Alloys	1,727	11,596	13,813
Miscellaneous uses	1,475	9,035	10,807
Total consumption	28,735	218,371	248,625
of which:			
Imported virgin lead	15,427	112,828	125,193
English refined	5,667	46,808	58,960
Scrap including remelted	7,641	58,735	64,472

U. K. ZINC STATISTICS

U. K. zinc stocks at the end of August amounted to 53,584 tons compared with 55,362 tons on July 31st, reports the British Bureau of Non-Ferrous Metal Statistics. Of these figures, consmers held 21,871 tons and 21,468 tons respectively.

U. K. zinc production in August fell to 5,022 tons from the previous monht's figure of 5,910 tons. Consumption was virtually unchanged at 25,764 tons compared with 25,594 tons in July. Details are given below:

	Aug. 1960	Jan.-Aug. 1959	Jan.-Aug. 1960
Brass	8,949	68,450	81,647
Galvanizing	7,946	61,826	65,405
of which:			
General	2,775	21,738	23,068
Sheet	1,911	15,659	15,950
Wire	1,947	12,932	14,755
Tube	1,313	11,497	11,632
Rolled zinc	1,513	15,485	16,303
Zinc oxide	1,553	18,450	17,508
Zinc diecasting and forming alloy	4,083	34,133	43,059
Zinc dust	805	7,352	8,435
Miscellaneous uses	915	7,180	7,579
Total all trades	25,764	212,876	239,936
of which:			
Slab zinc			
High Purity (99.99%)	4,510	37,062	47,244
Electrolytic & high grade (99.95%)	4,595	39,991	44,893
G.O.B. & Prime Western & debased	10,463	78,275	87,291
Other virgin material	185	1,609	1,643
Remelted zinc	418	3,725	4,416
Scrap—zinc (content)			
Zinc metal, alloys & residues	2,074	21,139	20,806
Brass and other copper alloys	3,519	31,075	33,643

SETTLEMENT OF CHUQUICAMATA STRIKE HAS LITTLE EFFECT ON COPPER IN U. S.; PRICE HOLDS AT 30c

Advance in Brass Mill Products Reflects Higher Costs; Lead, Zinc Quiet But Unchanged; Some Aluminum Alloys Cut; Quicksilver, Platinum Steady

November 17, 1960

THE excitement in the copper market subsided during the month in review with the market stabilizing at least temporarily at the 30.00c level quoted by the major domestic producers and custom smelters. Lead and zinc continued quiet but steady pricewise, the former at 12.00c New York and the latter at 13.00c East St. Louis for the Prime Western grade. Among the other metals, leading producers reduced prices for certain aluminum alloys, while tin continued to move in a narrow range. Quicksilver, silver and platinum prices were unchanged during the month in review.

Chuqui Strike Settled

Settlement of the strike at Anaconda's Chuquicamata mine in Chile had little effect on the domestic copper market. The 7,000 or so workers at Chuqui went back to work on November 14, after having been out since October 1. The Chilean Minister of Labor succeeded in having the strikers accept Anaconda's offer of a 25 per cent general wage increase with no bonuses or other fringe benefits. Anaconda had made this offer on September 30 in an effort to head off the strike. The loss in production is estimated at about 35,000 tons.

According to London factors, Anaconda had declared force majeure when the strike broke out but had been able to supply about 50 per cent of the tonnage that foreign customers had bought. But the customers also were informed that the company may not be able to make up the 50 per cent since the major portion of its 1961 Chilean output has already been sold.

Strauss on Copper

The present price of copper can hold if producers exercise self-restraint in the sale of the metal, according to Simon D. Strauss, vice president of American Smelting and Refining Co. Copper producers, he declared, have the financial resources to carry the stocks that they may accumulate. However, if they should try to sell their surplus abroad, he said, such selling pressing might have a depressing effect on prices.

Scrap Firmer

While domestic consumer demand for refined copper has been slow, prices for scrap copper have firmed up. On November 17 custom smelters increased their bids for such material by 0.25c a pound to a basis of 23.50c a pound for No. 2 heavy copper and wire. Smelters indicated they had been having difficulty in getting adequate tonnages of scrap copper. The export demand, coupled with the reduced industrial activity, has curtailed the available supply of scrap. It was a paradoxical situation; demand for refined metal was light but smelters were trying to buy scrap.

Wire, Cable Prices

Phelps Dodge Copper Products on November 7 reduced its prices on leaded paper power cable and polyethylene sheathing, and on November 21 increased its prices of magnet wire.

The reduction for the leaded paper power cable, PD said, was made with "the sole object of facing up to the increasing attack on our business on the part of foreign manufacturers anxious to enter our market."

Mill Products Raised

Earlier, leading fabricators announced increases in their copper and brass mill product prices of approximately one to two per cent of the net prices, effective October 31. Revere Copper and Brass, which initiated the rise, said the increases reflected increased labor cossts involved in both long-term and recently negotiated labor contracts. The fabricators did not increase their brass mill scrap buying prices.

October Copper Statistics

The copper statistics for October made a poor showing in that there was a sharp drop in domestic and foreign deliveries and a big increase in domestic refined stocks. Domestic refined copper figures for October follow in tons, with the September totals in parentheses: production, 151,497 (147,934); deliveries to fabricators, 93,451 (120,585), and stocks at end of month, 113,417 (84,316).

World (combined U. S. and foreign) statistics for refined copper were: production, 308,398 (322,575); deliveries, 280,522 (328,660), and stocks at end of month, 408,152 (378,845).

The September figures had been considered as bullish. If the September and October figures are averaged, the result is a more accurate picture of the situation. If deliveries in both months are taken together, they average out at 107,000 tons or in line with the monthly average for the first 10 months of the current year—108,000 tons.

But the general impression in trade circles is that unless there is some action taken on curtailing production, the statistical position is not likely to improve for the balance of the year.

Large primary producers were pricing their shipments at 30.00c a pounds delivered. Most business booked by the custom smelter was at the November average. Indications were that smelters are well sold ahead for the current month, so no price change was deemed likely during the balance of November.

Strauss on Lead, Zinc

Mr. Strauss also presented some of his views on lead and zinc. Lead consumption in the U. S. this year is falling below expectations, he said, with the metal having lost certain markets, such as sheathing for cables. The lead market, he said, should follow the general business trend in 1961, and he anticipated an improvement in demand next year. Discussing the price of lead, he stated that the 12.00c a pound New York currently quoted is a low one for lead. He expects the price to be stable in 1961.

As for zinc, Mr. Strauss said, consumption of the metal abroad is proportionately better than it is in the U. S. Zinc stocks abroad, he said, are small and the foreign price of the metal is stable. In contrast, consumption in the U. S. in 1960 will be smaller than it was in 1959, he declared. The low rate of steel operations and the inroads that the compact cars are making in the automobile industry are partly responsible for the falling off in domestic consumption, Mr. Strauss said.

Zinc consumption in 1961 probably

will be better than in 1960, Mr. Strauss said, but whether the improvement will be great enough to better the price of the metal was problematical. If the strikes at Bunker Hill and New Jersey Zinc were to end, he declared, it might be difficult to hold the zinc price.

Demand for lead and zinc currently has been moderate. Business for lead was placed mainly at the November average, with some carload sales at the spot price of 12.00c a pound New York. The zinc spot quotation was unchanged at 13.00c East St. Louis for the Prime Western grade but most of the current business was placed at the monthly average.

October Zinc Statistics

The October zinc statistics failed to come up to expectations. A gain in shipments during the month had been looked for but this failed to materialize. In fact, the combined shipments to domestic consumers and for export came to 65,183 tons, a drop of 2,999 tons from September. The decline was due principally to the falling off in exports, the October figure being 6,611 tons as compared with 10.045 tons in September. Shipments to domestic consumers in October were 58,572 tons as compared with 58,137 tons the preceding month.

Production of all grades of zinc in October amounted to 63,005 tons as against 60,004 tons in September. Stocks of all grades in producers' hands at the end of October came to 190,288 tons compared with 192,466 tons at the end of September.

Tin Prices

Spot Straits tin at New York on November 17 was quoted at 103.25c a pound, as against the last previous price quoted in this space of 103.125c on October 17. During the October 17-November 17 period, the high of 104.125c was registered on November 3, while the low of 103.125c occurred on October 17 and 25.

Aluminum Alloy Prices

Leading producers have reduced their selling prices for certain foundry alloy ingots and aluminum extrusion ingots, effective November 2. The foundry ingot No. 214 price was cut 2.50c a pound to 29.00c a pound in 50-pound ingots; the B214 and F214 alloys were similarily reduced to 29.00c, while the A214 price was maintained at 31.50c. The extrusion ingot alloy 6463 was cut by 1.30c a pound to 28.60c a pound in the 18-48-inch lengths and to 28.80c in 11 to 18-inch lengths.

One producer said the reductions for the foundry alloys reflected better control over production costs, while the cut in the extrusion alloy price was a competitive move.

Crude aluminum exports in September dropped to 31,800,000 pounds from 58,600,000 pounds in August. Exports for the first nine months of this year totaled 450,700,000 pounds as against 130,900,000 pounds in the like 1959 period.

Producers maintained their price for the primary aluminum 50-pound ingot, 99.5 per cent grade, at 26.00c a pound, f.o.b.

Quicksilver, silver and platinum prices were unchanged during the month in review. Quicksilver held at $208-$210 per flask of 76 pounds, New York silver was steady at 91.375c an ounce, and platinum was maintained at $81-$85 an ounce.

British Metal Markets

(Continued from Page 12)

Presidential election is out of the way.

Speculation in Lead

An aspect of the lead market in October which it has shared with the other metals, but featured more strongly, has been the speculative interest in the metal alongside the spectacular and unprecedented flurry in gold prices. Sparked off by a number of developments on the international monetary scene, all of which accentuated the fear of a devaluation of the dollar which has been in the background for some time past, the speculative buying of gold was symptomatic of an attitude of mind which drove some people to switch into other commodities than gold — either for reasons of particular advantage or of greater familiarity. Undoubtedly the most popular of the metals in this context was lead, probably because in the mid/60's the metal presented a reasonable speculative bet in itself, at any rate for a short term gain on the London market if not for the long term.

The pattern of lead prices in recent months has been one not uncharacteristic of a market in which there is nothing basically to go for and which is therefore at the whim of day to day factors which assume so much importance in a thin market. In the case of London, as we have reported previously, one of the main questions has always been the rate at which Spanish metal was being delivered on to the market.

In recent weeks it has been felt that a further incursion of Spanish metal which might otherwise be expected in view of today's relatively good prices (relative, that is, to the earlier part of October) may have been deferred, perhaps in anticipation of even better prices. Certainly a rather stronger attitude has been taken to lead, especially in the nearby position.

Better Tone in Zinc

Day to day price movements in zinc in October have been somewhat more modest than those of the other metals. All the same a broadly better tone has tended to materialize in the latter part of the month. While this has undoubtedly been furthered by the generally more optimistic tide of sentiment (the optimism is duly cautious) it has stemmed from certain factors which may be considered peculiar to zinc.

As far as the London market is concerned one of the more relevant is that the domestic producer, which normally sells a reasonable proportion of its output on to the London market, has experienced technical teething troubles with its revolutionary new zinc smelter, which have tended to disrupt supplies from that direction to some extent. There is still plenty of zinc available from other parts of the world for U. K. consumers to use, but as far as the London market is concerned, the fact that this development has overtaken one of its staple suppliers has been obviously of some local significance.

That the troubles in question are only viewed as temporary is reflected in the fact that there has been a backwardation in zinc all the month which was particularly acute at settlement days. Actual consumption of zinc in the U. K. is still at a very reasonable level and indeed it may be felt that the level is remarkably good when it is remembered that the zinc industry is quite heavily dependent on the motor car industry, especially through diecastings, and that the motor car industry in this country as in other European countries is not enjoying the most buoyant of markets at the moment. The speculative flurry in gold noted under lead was not without its influence on zinc, but whereas other factors seemed to help lead hold a large part of its gains which were registered under that influence, zinc, despite the points enumerated above does not seem to be set at the moment to continue to exhibit strength and to improve in price.

Time of course will tell, but as a measure of what is being achieved, the London market is on the alert for the moment that zinc passes £90 a ton, a level which has not been seen in this market for all too long.

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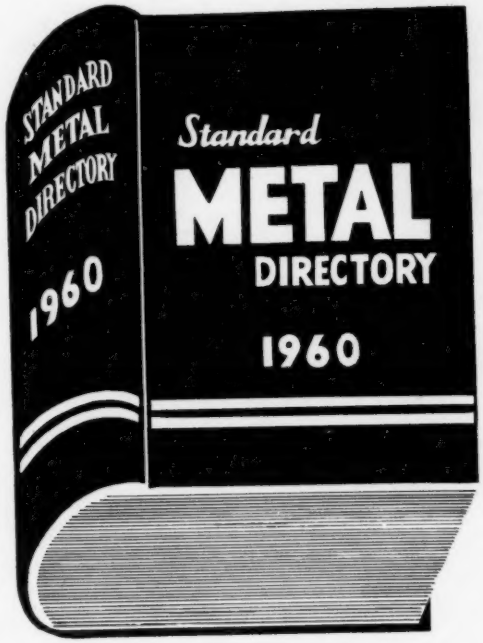

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STANDARD METAL DIRECTORY

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Copper Brands

Deliverable Against Commodity Exchange, Inc.

Brand or Marks	Producer	Grade
B. E. R.	American Smelting & Refining Co. (Baltimore, Md.)	Electrolytic
P. A.	American Smelting & Refining Co. (Maurer, N. J.)	Electrolytic
T	American Smelting & Refining Co. (Tacoma, Wash.)	Electrolytic
B. & M.	Anaconda Copper Mining Co.	Electrolytic
AE	Andes Copper Mining Co.	Electrolytic
BOLIDEN	Bolidens-Gruvaktiebolag	Electrolytic
C. C. R.	Canadian Copper Refiners Ltd. (Montreal)	Electrolytic
C de P Peru	Cerro de Pasco Corporation	Electrolytic
C. C. C.	Chile Copper Company	Electrolytic
F E C	Falconbridge Nickel Mines, Ltd.	Electrolytic
K U E	Kennecott Copper Corp.	Electrolytic
L. M. C.	Lewin Metals Corporation	Electrolytic
M U F	Mufulira Copper Mines, Ltd.	Electrolytic
N A	Norddeutsche Affinerie	Electrolytic
O R C	Ontario Refining Co., Ltd.	Electrolytic
A. L. S.	Phelps Dodge Refining Corp. (For Adolph Lewisohn Selling Corp.)	Electrolytic
L. N. S.	Phelps Dodge Refining Corp.	Electrolytic
P • D	Phelps Dodge Corporation	Electrolytic
N. E. C.	Raritan Copper Works	Electrolytic
R E C	Rhokana Corporation	Electrolytic
B O R	Rudnici Bakra i Topionice	Electrolytic
U M K	Union Miniere du Haut Katanga	Electrolytic
D R W	†United States Metals Refining Co.	Electrolytic
AMCO	†United States Metals Refining Co.	Electrolytic
OFHC	†United States Metals Refining Co.	Electrolytic
W E K	Zinnwerke Wilhelmsburg G.m.b.H.	Electrolytic

† Subsidiary, American Metal Climax, Inc.

Brand or Marks	Producer	Grade
C & H	Calumet & Hecla Consolidated Copper Co.	Lake
C. R.	Copper Range Company	Lake
Q. M. CO.	Quincy Mining Company	Lake

Brand or Marks	Producer	Grade
B. C. R.	British Copper Refiners, Ltd.	Fire Refined High Conductivity
N. H. E.	Nassau Smelting & Refining Co., Inc.	Fire Refined High Conductivity
A M CO	United States Metals Refining Company	Fire Refined High Conductivity
R H C		

Brand or Marks	Producer	Grade
• • • (3 Star)	Braden Copper Company	Fire Refined (other than Lake & Fire Refined High Conductivity)
K C M	Kennecott Copper Corporation	
M T D	Messina (Transvaal) Development Co.	
P. D. M.	Phelps Dodge Corporation	
R	†United States Metals Refining Company	

Official List of Approved Refiners Whose CATHODES are deliverable against Commodity Exchange, Inc., Copper Contract

American Smelting & Refining Co.
Anaconda Copper Mining Co.
Andes Copper Mining Co.
Bolidens-Gruvaktiebolag
Canadian Copper Refiners, Ltd.
Cerro de Pasco Copper Corp.
Chile Copper Company
Consolidated Mining & Smelting Co.
Falconbridge Nickel Mines, Ltd.
Kennecott Copper Corp.
Lewin Metals Corp.
Mufulira Copper Mines, Ltd.
Norddeutsche Affinerie
Ontario Refining Co., Ltd.
Phelps Dodge Refining Corp.
Phelps Dodge Corporation
Raritan Copper Works
Rhokana Corporation
Rudnici Bakra i Topionice
Union Miniere du Haut Katanga
United States Metals Refining Co.
Zinnwerke Wilhelmsburg G.m.b.H.

Lead Brands

Refined At	Producer	Brand Mark
Federal, Ill., U. S.	American Smelting & Refining Co.	*ALTON
Carteret, N. J., U. S.	United States Metals Refining Co.	**A M CO
Monterrey, Mexico	American Smelting & Refining Co.	*ASARCO MONTERREY
Port Pirie, Australia	Broken Hill Associated Smelters	*B.H.A.S.
Indianapolis, Ind., U. S.	National Lead Co., American Lead Plant	†aBLUE ARROW AMERICAN LEAD CORP.
Braubach a/Rhein, Germany	Blei-und Silberhutte Braubach	*Braubach dopp. raff. Deutschland
Idaho, U. S.	Bunker Hill Smelter	*BUNKER "C" HILL
Oroya, Peru	Cerro de Pasco Copper Corp.	*CERRO PERU
Collinsville, Ill., U. S.	St. Louis Smelting & Refining Co.	†aCHEMICAL ST. L. S. & R. CO.
Monterrey, N. L., Mexico	Compania Metalurgica Penoles, S.A.	**C.M.F. y A.M.
Alton, Ill., U. S.	St. Joseph Lead Company	*DOE RUN
Oker, Germany	Unterharzer Berg- und Huttenwerke	*HARZ 99.985, HARZ 99.9
Joplin, Mo., U. S.	Eagle-Picher Mining & Smelting Co.	*EAGLE-PICHER
Kamioka, Japan	Mitsui Mining Co.	*E.M.K.
Stolberg, Rhineland, Germany	Stolberger Zinc Aktiengesellschaft fur Bergbau und Hattenbetrieb	*Eschweiler raffine
Federal, Ill., U. S.	American Smelting & Refining Co.	*FEDERAL
Chicago, Ill., U. S.	Goldsmith Bros. Smelting & Refining Co.	†G B
Hoboken, Belgium	Societe Generale Metallurgique de Hoboken	*H.E.R. Escaut
Alton, Ill., U. S.	St. Joseph Lead Company	*HERCULANEUM
Omaha, Neb., U. S.	International Smelting & Refining Co.	*ILR
Monsanto, Ill., U. S.	Lewin-Mathes Co.	†MONSANTO
Monteponi, Italy	Societa di Monteponi	*Monteponi
San Gavino Monreale, Sardinia, Italy	Montevecchio Societa Italiana del Piombo e dello Zinco	*Montevecchio
Hammond, Ind., U. S.	Metals Refining Company	†M R CO METALS REFINING CO.
Omaha, Neb., U. S.	American Smelting & Refining Co.	*OMAHA & GRANT
Overpelt, Belgium	Compagnie des Metaux d-Overpelt-Lommel et de Corphalie, S.A.	*Overpelt extra-raffine O.V.-L.L.-Dur.
Megrine, Tunis	Ste. Min. & Metall. de Penarroya	*Penarroya
Penarroya, Sopwith & Cartagena, Spain	Ete Min. & Met. de Penarroya	*Penarroya
Perth Amboy, N. J., U. S.	American Smelting & Refining Co.	*PERTH AMBOY
Genoa, Italy	Societa di Pertusola	*Pertusola
Alton, Ill., U. S.	St. Joseph Lead Company	*ST. JOE
Collinsville, Ill., U. S.	St. Louis Smelting & Refining Co.	†aST. L. S. & R. CO.
Selby, Calif., U. S.	American Smelting & Refining Co.	*SELBY
Trail, B. C., Canada	Consolidated Mining & Smelting Co. of Canada, Ltd.	*TADANAC
Baelen-Usines, Belgium	Ste. des Mines and Founderies de Zinc de la Vieille-Montagne Anglem	*Three Stars Vieille-Montagne Bar
Mesica, Yugoslavia	Central European Mines, Limited	*TRECA
Perth Amboy, N. J., U. S.	American Smelting & Refining Co.	*TSUMCO
Hoboken, Belgium	The Tsumeb Corporation	*TSUMCO
Midvale, Utah, U. S.	United States Smelting, Refining & Mining Company	*USS CO
E. Chicago, Ind., U. S.	United States Smelting, Refining & Mining Company	*U S S CO ELECTRO
Norfolk, Va., U. S.	Virginia Lead Smelting Corp., The	†aVIRGINIA
Staten Island, N. Y., U. S. A.	Nassau Smelting & Refining Co.	Nassau Blue
Newark, N. J., U. S. A.	Hudson Smelting & Refining Co.	Hudson
Philadelphia, Pa., U. S. A.	Bers & Co., Inc.	Schuylkill

*Deliverable against: Commodity Exchange, Inc., Lead Contracts without Certificate of Assay.

** Subsidiary of American Metal Climax, Inc.

†Deliverable against Commodity Exchange, Inc., Lead Contracts with Certificate of Assay of one of the Official Assayers of the Exchange.

aSubsidiary of National Lead Co.

United States Duties on Principal Ore and Metal Imports

(Including Revisions in Effect June 30, 1957, Under Geneva Agreements)

(Quantities Are in Pounds Unless Otherwise Stated; n.s.p.f. Stands for "Not Specially Provided For.")

COPPER

NOTE — The excise tax of 4c a pound on copper (which was reduced to 2c a pound by the Geneva Trade Agreement) was suspended in April, 1947, until March 31, 1949, and on expiration it was further suspended until June 30, 1950. The tax was reimposed on July 1, 1950. It was suspended again on May 22, 1951, retroactive to April 1, 1951, and until February 15, 1953, and again until June 30, 1954. Suspension further extended to June 30, 1955, and again until June 30, 1958. The tax was restored July 1, 1958. The 1956 Geneva Agreement provided for 5% reductions effective on June 30 of 1956, 1957 and 1958, provided the prices were above 24c; if the price is below 24c the 2c tax will prevail.

Copper ore and concentrates, usable as flux, etc., having a copper content of not more than 15% and in an aggregate amount not to exceed in any one year 15,000 tons of copper content	free
Copper ore and concentrates, product of Cuba, copper content	**free**
Copper ore and concentrates, product of Philippines, copper content	0.17c lb.
Copper ore and concentrates, copper content	**1.70c lb.**
Regulus, black, or coarse copper, and cement copper, copper content	**1.70c lb.**
Unrefined black, blister, and converter copper in pigs or converter bars, copper content	**1.70c lb.**
Refined copper in ingots, plates or bars, copper content	**1.70c lb.**
Copper rolls, rods or sheets	**1¼c lb. (plus 1.70c lb. ††)**
Copper seamless tubes and tubing	3½c lb. (plus 1.70c lb. ††)
Copper plain wire	12½% (plus 1.70c lb. ††)
Copper brazed tubes†	**4.50c lb. (plus 1.70c lb. ††)**
Old and scrap copper, fit only for remanufacture: and scale and clippings, copper content	**1.70c lb.**

†† Copper content.

BRASS

Brass rods, sheets, plates, bars, strips, Muntz or yellow metal sheets, sheathing, bolts, piston rods, shafting and bronze rods, tubes and sheets	**2c lb.**
Brass tubes and tubing, seamless	2c lb.
Brass tubes, brazed, angles and channels	6c lb.
Brass and bronze wire	12½%

LEAD

NOTE — Import duties on lead-bearing ores, flue dust, and mattes of all kinds, lead bullion or base bullion, lead in pigs and bars, lead dross, reclaimed lead and antimonial lead were suspended February 12, 1952, and reimposed on June 26, 1952. Lead scrap duty was reimposed July 1, 1952.

Lead-bearing ores and mattes, n. s. p. f., lead content	¾c lb.
Bullion or base bullion, lead content	1 1/16c lb.
Pigs and bars, lead content	1 1/16c lb.
Reclaimed, scrap, dross, lead content	1 1/16c lb.
Babbitt metal and solder, lead content	1 1/16c lb.
Pipe, sheets, shot, glaziers' lead, and wire	1 5/16c lb.
Type metal and antimonial lead, lead content	1 1/16c lb.
White lead	1.05c lb.
Litharge	1¼c lb.
Red lead	15/16c lb.
Orange mineral	1c lb.

ZINC

NOTE — Import duties on zinc-bearing ores, and on zinc in blocks, pigs and slabs were suspended February 12, 1952, and reimposed on July 24, 1952. Tax on old zinc and dross and skimmings reimposed July 1, 1953.

Zinc-bearing ores, except pyrites containing not more than 3% zinc, zinc content	6/10c lb.
Zinc contained in zinc-bearing ores, n. e. s., not recoverable, zinc content	6/10c lb.
Zinc, old and worn out, fit only for remanufacture	¾c lb.
Dross and skimmings	¾c lb.
Zinc in blocks, pigs or slabs	7/10c lb.
Zinc in sheets	1c lb.
Zinc sheets, plated with nickel or other base metal, or solutions	**1⅛c lb.**
Zinc dust	7/10c lb
Zinc die-casting alloys	12½%
Zinc oxide and leaded zinc oxides containing not more than 25% lead, dry	3/5c lb.
ground in or mixed with oil or water	1c lb.

MISCELLANEOUS METALS AND ORES

Aluminum, metal and alloys, crude, except **alloys elsewhere provided for†**	**1.25c lb.**
Aluminum scrap	free
Aluminum plates, sheets, bars, rods, circles, **squares, etc.†**	**2.50c lb.**
Antimony ore, antimony content	free
Antimony metal and regulus	2c lb.
Antimony needle or liquidated	¼c lb
Antimony oxide	1c lb.
Antimony sulphides	½c lb. & 12½%
Arsenic, metallic†	**2.50c lb.**
Arsenious acid or white arsenic	free
Bauxite, crude*	**free**
Bauxite, refined**	**¼c lb.**
Bismuth	**1⅞%**
Bismuth salts and compounds	35%
Beryllium metal†	**21%**
Beryllium ore	free
Cadmium	3¾c lb.
Cadmium flue dust, cadmium content	free
Chrome ore or chromite	free
Chrome or chromium metal†	**10½%**
Cobalt metal	free
Cobalt ore and concentrates, cobalt content	free
Magnesium, metallic†	**50%**
Magnesium powder, sheets, wire†	**17c lb. & 8½%**
Magnesium alloys	**20c lb. & 10%**
Magnesium scrap	free
Manganese ores, containing over 10% manganese, manganese content	¼c lb., except Cuba, free
Molybdenum ore or concentrates, molybdenum **content†**	**30c lb.**
Nickel ore, matte and oxide	free
Nickel and alloys, nickel chief value, n. s. p. f., in pigs, ingots, shot, cubes, grains, cathodes, or similar forms	1¼c lb.
Nickel, bars, rods, plates, sheets, castings, strips, wire or electrodes	12½%
Nickel scrap	free
Nickel tubes, tubing (if cold rolled, drawn or worked — 2½% extra)	6¼%
Platinum, grain, nuggets, sponge and scrap, oz. troy	free
Platinum in ingots, bars, sheets, or plates, not less than ⅛ in. thick, oz. troy	free
Platinum, ores, platinum content, oz. troy	free
Quicksilver or mercury	25c lb.
Selenium and salts	free
Tantalum	12½%
Tin ore, cassiterite, and black oxide of tin, tin content	free
Tin in bars, blocks, pigs, grain, granulated, and scrap, and alloys, chief value tin, n. s. p. f.	free
Tungsten ore or concentrates, tungsten content	50c lb.

*Crude bauxite import duty suspended through July 15, 1960. **Under Public Law 25 alumina imported for use in aluminum production is free for entries from July 17, 1956 through July 15, 1960. †Tariff reduced 5% on June 30, 1958, under Geneva Agreement which expires on June 30, 1959.

Daily Metal Quotations for October, 1960

The following quotations are taken from the Daily Metal Reporter*
(In Cents Per Pound)

OCTOBER	Copper					Tin (Straits New York)		Lead		Zinc					Aluminum†	Antimony	Silver
	Producers' Price Delivered	Custom Smelters' Price, Del.	Electro f. o. b. Refinery	Lake Del.	Aver. Prompt Electrolytic Export Price F.a.s. N. Y.	Spot	Prompt	New York	Outside St. Louis	Prime West. f. o. b. E. St. Louis	Prime West. Del. N. Y.	Brass Spec. f. o. b. E. St. Louis	High Grade Delivered	Spec. High Grade Delivered	50-Lb. Ingot 99½% Min. f. o. b.	Domestic Spot 99.5% f.o.b. Laredo	(Cents Per Ounce) New York
3	33.00	31.00	31.60	33.00	29.00	102.875	102.875	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
4	33.00	31.00	31.60	33.00	28.50	102.875	102.875	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
5	33.00	31.00	31.60	33.00	28.50	103.125	103.125	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
6	33.00	31.00	31.60	33.00	28.50	103.75	103.75	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
7	33.00	31.00	31.60	33.00	28.50	103.50	103.50	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
10	33.00	31.00	31.60	33.00	28.50	103.75	103.75	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
11	33.00	31.00	31.60	33.00	28.50	103.75	103.75	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
13	30.00	30.00	29.60	30.00	28.00	103.75	103.75	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
14	33.00	30.00	29.60	30.00	28.00	103.375	103.25	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
17	30.00	30.00	29.60	30.00	28.00	103.125	103.125	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
18	30.00	30.00	29.60	30.00	28.00	103.25	103.25	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
19	30.00	30.00	29.60	30.00	27.75	103.25	103.25	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
20	30.00	30.00	29.60	30.00	28.00	103.375	103.375	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
21	30.00	30.00	29.60	30.00	28.00	103.25	103.25	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
24	30.00	30.00	29.60	30.00	28.00	103.25	103.00	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
25	30.00	30.00	29.60	30.00	27.75	103.125	103.00	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
26	30.00	30.00	29.60	30.00	27.75	104.00	103.25	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
27	30.00	30.00	29.60	30.00	27.75	104.00	103.25	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
28	30.00	30.00	29.60	30.00	27.75	104.00	103.50	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
31	30.00	30.00	29.60	30.00	27.75	104.00	103.50	12.00	11.80	13.00	13.50	13.25	14.35	14.50	26.00	29.00	91.375
AV.	**31.05**	**30.35**	**30.30**	**31.05**	**28.125**	**103.469**	**103.319**	**12.00**	**11.80**	**13.00**	**13.50**	**13.25**	**14.35**	**14.50**	**26.00**	**29.00**	**91.375**
HI.	**33.00**	**31.00**	**32.60**	**33.00**	**29.00**	**104.00**	**103.75**	**12.00**	**11.80**	**13.00**	**13.50**	**13.25**	**14.35**	**14.50**	**26.00**	**29.00**	**91.375**
LO.	**30.00**	**30.00**	**29.60**	**30.00**	**27.50**	**102.875**	**102.875**	**12.00**	**11.80**	**13.00**	**13.50**	**13.25**	**14.35**	**14.50**	**26.00**	**29.00**	**91.375**

* When split quotations prevail the daily average price is listed. The highs and lows for the month take into consideration the levels reached at both sides of such ranges.
† Price prior to August 1, 1960, was 28.10c, based on 30-lb ingot, 99½% plus.

Copper Statistics Reported by Copper Institute

Combined Totals in U. S. A. and Outside U. S. A.

(In tons of 2,000 pounds)

	Crude Production		Refined	Deliveries to	Refined Stock	Stock Increases or Decreases		
	Primary	Secondary	Production	Customers	End of Period	Blister	Refined	Total
1957								
Total	**2,897,719**	**123,270**	**3,035,588**	**2,853,307**	**458,340**	**—14,599**	**+103,920**	**+89,321**
1958								
Total	2,713,412	138,696	2,811,108	2,918,404	262,544	+41,000	—195,796	—154,796
1959								
December	211,575	9,767	203,614	238,095	293,006	+17,728	—18,043	— 315
Total	2,860,454	134,583	2,926,657	2,973,026	293,006	+68,380	+28,774	+97,154
1960								
January**	259,779	13,116	257,614	272,040	304,038	+15,278	— 3,426	+11,852
February	271,765	14,578	269,952	280,656	302,351	+16,391	— 1,687	+14,704
March	307,064	12,198	303,503	307,572	300,790	+15,759	— 1,561	+14,198
April	302,268	17,477	326,403	319,037	309,357	— 6,658	+ 8,567	+ 1,909
May	301,070	17,248	323,167	321,783	312,666	— 4,849	+ 3,309	— 1,540
June	302,703	16,786	329,518	305,964	338,202	—10,029	+25,536	+15,507
July	294,052	13,584	299,427	268,191	371,306	+ 8,209	+33,104	+41,313
August	295,318	16,257	330,365	319,337	383,305	—18,790	+11,999	— 6,791
September	306,264	12,718	322,575	328,660	378,845	— 3,223	— 4,460	— 7,683
October	286,083	13,116	308,398	280,522	408,152	— 9,199	+29,307	+20,108

In U. S. A.

1957								
Total	**1,116,380**	**112,060**	**1,616,964**	**1,277,946**	**181,024**	.....	**+60,379**	.....
1958								
Total	1,008,170	131,294	1,446,540	1,179,416	80,722	.....	—100,302	.....
1959								
December	26,686	8,595	46,302	90,039	64,763	.....	— 9,879	.....
Total	805,875	121,462	1,221,612	1,312,328	64,763	.....	—17,647	.....
1960								
January	65,677	10,707	86,491	102,829	68,550	.....	+ 3,787	.....
February	85,899	12,628	105,417	111,851	64,007	.....	— 4,543	.....
March	107,514	9,166	131,308	126,776	61,598	.....	— 2,409	.....
April	104,895	14,765	153,053	129,663	63,373	.....	+ 1,775	.....
May	104,272	13,857	147,050	108,266	65,328	.....	+ 1,995	.....
June	95,522	13,585	161,073	106,207	87,667	.....	+22,339	.....
July	91,238	10,822	132,697	83,788	93,102	.....	+ 5,435	.....
August	85,579	13,368	157,382	105,417	97,379	.....	+ 4,277	.....
September	96,503	10,150	147,934	120,585	84,316	.....	—13,063	.....
October	101,977	10,634	151,497	93,451	113,417	.....	+29,101	.....

Outside U. S. A.*

1957								
Total	**1,781,339**	**11,210**	**1,418,624**	**1,575,361**	**277,316**	.....	**+43,541**	.....
1958								
Total	1,705,242	7,402	1,364,568	1,738,988	181,822	.....	—95,494	.....
1959								
December	184,889	1,172	157,312	148,056	228,243	.....	— 8,164	.....
Total	2,054,579	13,121	1,705,045	1,660,698	228,243	.....	+46,421	.....
1960								
January**	194,099	2,409	171,123	169,211	235,488	.....	— 7,213	.....
February	185,866	1,950	164,535	168,805	238,344	.....	+ 2,856	.....
March	199,550	3,023	172,145	180,796	239,192	.....	+ 848	.....
April	197,373	2,712	173,350	189,374	245,984	.....	+ 6792	.....
May	195,278	3,391	174,298	210,868	247,338	.....	+ 1,354	.....
June	207,181	3,201	168,445	199,757	250,535	.....	+ 3,197	.....
July	202,814	2,762	166,730	184,403	278,204	.....	+27,669	.....
August	209,736	2,421	172,983	213,920	285,926	.....	+ 7,722	.....
September	210,131	2,568	174,641	208,075	294,529	.....	+ 8,603	.....
October	184,106	2,482	156,901	187,081	294,735	.....	+ 206	.....

* Excludes production of Russia, Japan, Yugoslavia, Norway, Sweden, Finland, the Messina Mine in Transvaal and output of several other small producing countries from which reports are not available. Represents approximately 90 per cent of Free World.

** Starting with January, 1960, figures include production from Australia and additional production from Europe.

Electrolytic Copper

Producers' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	36.00	25.69	29.00	33.00
Feb.	33.318	25.00	29.972	33.00
Mar.	32.00	25.00	31.14	33.00
Apr.	32.00	25.00	31.50	33.00
May	32.00	25.00	31.50	33.00
June	30.955	25.36	31.50	33.00
July	29.25	26.125	30.587	33.00
Aug.	28.639	26.50	30.00	33.00
Sept.	27.031	26.50	30.571	33.00
Oct.	27.00	27.548	30.75	31.05
Nov.	27.00	29.00	32.375	...
Dec.	27.00	29.00	33.00	...
Aver.	**30.183**	**26.31**	**30.991**	...

Electrolytic Copper

Custom Smelters' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	34.87	24.577	29.429	35.00
Feb.	32.273	23.557	30.361	35.00
Mar.	30.952	23.326	33.31	33.609
Apr.	31.24	23.66	32.84	33.00
May	30.163	23.865	32.00	33.00
June	29.60	25.52	31.477	33.00
July	28.39	29.231	29.52	33.00
Aug.	27.862	26.52	30.056	33.00
Sept.	25.948	26.355	33.00	33.00
Oct.	25.722	28.577	33.00	30.35
Nov.	25.435	29.829	Nom.	...
Dec.	25.26	28.846	35.00	...
Aver.	**28.93**	**25.905**	**31.808**	...

Lake Copper

Producers' Price Delivered
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	36.00	25.69	29.00	33.00
Feb.	33.182	25.00	30.00	33.00
Mar.	32.00	25.00	31.14	33.00
Apr.	32.00	25.00	31.50	33.00
May	32.00	25.00	31.50	33.00
June	30.955	25.00	31.50	33.00
July	29.25	25.75	30.587	33.00
Aug.	28.611	26.50	30.00	33.00
Sept.	27.031	26.50	30.571	33.00
Oct.	27.00	27.577	31.50	31.05
Nov.	27.00	29.00	32.833	...
Dec.	27.00	29.00	33.00	...
Aver.	**30.162**	**26.251**	**31.222**	...

Fabricators' Copper Statistics

(In tons of 2,000 pounds)

	Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined by Fab. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consmd. by Fabricators	Excess Fabricators' Stocks Over Orders Bkd.
1954						
Total	360,526	58,125	304,619	136,581	1,231,840	— 22,549
1955						
Total	.....	.....	.....	.....	1,418,241	.....
1956						
Total	.....	.....	.....	.....	1,416,378	.....
1957						
Nov.	428,520	68,249	345,832	128,719	98.725	+ 22,218
Dec.	430,171	75,627	347,465	138,631	83,067	+ 19,702
Total	.....	.....	.....	.....	1,279,086	.....
1958						
Jan.	445,514	57,917	348,426	123,756	94,642	+ 31,249
Feb.	452,673	52,342	351,035	128,330	86,625	+ 25,650
Mar.	448,125	71,693	346,875	141,387	83,694	+ 31,556
Apr.	450,442	76,602	347,607	145,623	79,613	+ 33,814
May	441,001	78,194	346,404	138,190	88,447	+ 34,601
June	433,526	72,383	330,301	145,162	109,011	+ 30,448
July	431,796	77,362	326,263	153,529	79,353	+ 29,366
Aug.	421,931	78,194	323,667	150,436	96,717	+ 26,022
Sept.	416,887	71,025	319,281	145,390	105,474	+ 28,941
Oct.	399,113	91,019	315,929	156,692	138,017	+ 17,511
Nov.	419,914	88,580	328,238	157,799	110,487	+ 22,457
Dec.	447,123	90,401	326,438	177,869	92,573	+ 35,217
Total	....	....	....	....	1,165,364	....
1959						
Jan.	457,387	101,182	337,761	172,698	108,556	+ 44,070
Feb.	459,046	123,321	390,522	183,113	116,565	+ 58,732
Mar.	449,441	130,785	334,904	211,547	133,259	+ 33,775
Apr.	463,582	125,250	337,282	204,618	120,680	+ 46,932
May	474,657	133,694	338,835	210,424	124,060	+ 59,092
June	492,072	111,229	343,585	191,875	133,702	+ 67,841
July	518,699	110,367	357,474	193,338	81,500	+ 68,254
Aug.	487,259	97,786	359,049	191,476	121,563	+ 34,520
Sept.	462,880	111,675	360,760	206,254	116,880	+ 7,541
Oct.	431,612	119,806	347,136	211,359	100,302	— 7,077
Nov.	412,401	127,162	338,856	224,442	102,837	— 23,735
Dec.	414,757	130,324	340,349	202,775	88,706	+ 1,957
Total	....	....	....	....	1,347,610	....
1960						
Jan.	414,652	141,860	340,233	193,300	102,295	+ 22,979
Feb.	423,131	132,696	343,196	165,991	103,072	+ 46,640
Mar.	441,026	119,963	348,081	134,461	108,881	+ 78,447
Apr.	457,070	99,814	357,711	111,062	113,619	+ 88,111
May	457,644	85,491	360,770	117,150	107,838	+ 65,215
June	451,982	90,527	364,301	132,070	112,223	+ 46,138
July	459,620	87,798	372,186	126,281	75,650	+ 48,951
Aug.	457,421	81,338	373,186	122,415	107,616	+ 43,026
Sept.	465,178	77,787	378,677	127,346	112,828	+ 37,032
Oct.	453,406	75,052	370,939	118,241	105,223	+ 39,268

Scrap Copper Receipts by Custom Smelters and Refineries in United States*

(In Short Tons)

	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Jan.	6,640	4,528	6,486	9,859	11,047	14,322	17,506	16,024	14,511	15,165
Feb.	5,153	3,693	10,337	8,490	15,198	14,497	11,145	9,518	14,712	14,614
Mar. ...	7,912	5,243	19,991	9,788	12,198	15,921	13,934	11,783	19,522	11,675
Apr.	8,553	6,214	16,583	9,004	13,162	17,233	14,288	15,279	17,525	17,543
May	8,458	8,033	10,857	8,687	15,133	20,805	12,397	13,989	13,960	16,497
June	8,628	4,425	10,945	13,309	14,765	14,758	11,949	13,945	15,065	15,769
July	6,642	5,188	9,063	10,260	9,988	12,632	8,926	12,185	11,144	12,609
Aug.	6,113	5,003	7,137	10,100	12,197	12,510	11,645	11,896	7,468	16,400
Sept. ...	3,561	4,667	9,042	10,641	15,037	9,518	9,756	9,268	10,070	12,559
Oct.	3,336	4,602	10,065	11,662	12,897	15,570	13,151	23,088	12,860	13,168
Nov.	3,179	4,724	7,815	10,879	9,865	11,869	11,146	16,425	11,773	....
Dec.	4,538	6,208	11,476	14,876	13,180	14,613	11,237	10,796	10,894	....
Total ..	71,812	62,479	129,798	127,449	154,714	178,748	147,080	164,196	159,507	....

* As compiled by Copper Institute.

Brass and Bronze Ingot Monthly Shipments

(NET TONS)

The following figures showing the combined shipments of ingot brass and bronze are compiled by the Ingot Brass and Bronze Industry and represent in excess of 95 per cent of the deliveries of the entire industry.

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Jan.	18,874	28,416	28,315	23,423	20,661	25,201	27,736	25,681	20,468	22,046	22,695
Feb.	18,487	27,168	24,211	25,429	19,920	25,349	24,949	20,769	17,413	23,746	23,129
Mar.	22,494	31,997	23,890	28,256	23,653	29,713	28,310	21,948	18,825	26,109	23,232
Apr.	22,118	30,473	22,547	25,044	24,746	27,641	25,808	23,507	18,009	26,115	20,413
June	25,093	33,817	21,274	20,818	22,348	23,141	18,842	18,888	17,962	22,922	19,625
July	21,609	32,016	18,947	19,321	17,074	18,513	17,364	16,695	16,658	20,346	14,887
Aug.	29,689	25,285	21,807	20,156	21,684	27,013	23,812	19,654	17,882	21,741	20,216
Sept.	28,811	22,285	22,770	21,463	22,464	26,349	20,929	19,670	20,540	22,685	18,259
Oct.	32,240	23,124	25,811	22,280	24,080	25,228	23,045	22,800	23,225	23,067	....
Nov.	31,748	23,544	23,441	21,806	23,061	25,102	21,818	19,767	20,758	22,283	....
Dec.	28,575	20,987	22,983	20,541	21,274	21,448	18,046	16,875	18,676	19,535	....
Total	303,563	332,378	277,736	271,251	263,233	298,406	274,096	248,297	227,607	274,562	....
Aver.	25,297	27,615	23,145	22,694	21,936	24,867	22,841	20,681	18,133	22,864	....

Mine Production of Copper in United States

(U. S. Bureau of Mines)
(In short tons)

	Eastern	Missouri	Western	Total
1957				
Ttl.	79,369	1,800	995,753	1,076,922
1958				
Ttl.	76,849	1,250	902,021	980,304
1959				
Apr.	7,240	150	93,209	100,599
May	7,007	110	94,493	101,610
June	7,245	124	87,035	94,404
July	6,763	111	80,058	86,932
Aug.	6,813	116	47,910	54,839
Sept.	6,655	123	20,342	27,120
Oct.	7,092	152	22,669	29,913
Nov.	3,226	140	22,529	25,895
Dec.	3,228	128	22,504	25,860
Ttl.	74,255	1,550	754,630	830,435
1960				
Jan.	3,904	107	43,845	47,856
Feb.	3,819	114	71,257	75,190
Mar.	7,229	96	88,931	96,256
Apr.	7,149	97	90,288	97,534
May	7,530	77	91,152	98,759
June	7,296	97	87,839	95,232
July	6,096	76	80,119	86,291
Aug.	7,038	89	82,985	90,112

Average Custom Smelters' Scrap Buying Prices

(Cents per pound for carload lots del. consumers' works)

	No. 1 Copper Scrap	No. 2 Copper Scrap	Light Copper Scrap	Refinery Brass*
1958				
Aver	21.788	20.282	18.035	18.047
1959				
Sept.	26.369	24.869	22.319	24.369
Oct.	27.929	25.405	23.155	24.905
Nov.	30.00	26.208	23.958	24.528
Dec.	29.50	25.993	23.743	24.239
Av.	27.321	25.377	23.102	24.774
1960				
Jan.	30.025	26.30	24.05	24.55
Feb.	29.868	25.75	23.50	24.00
Mar.	27.207	24.038	21.788	22.071
Apr.	27.063	24.256	22.006	22.256
May	26.548	24.369	22.119	22.368
June	26.557	24.455	22.205	22.455
July	27.575	25.075	22.825	23.075
Aug.	27.962	25.81	23.56	23.81
Sept.	26.888	24.888	22.638	22.888
Oct.	24.90	22.90	20.65	20.90

*Of dry content for material having a dry copper content in excess of 69%.

Brass Ingot Makers' Scrap Copper Buying Prices

(Average Prices)
(Cents per pound del. refinery for 60,000 lbs. of each grade)

	No. 1 Copper Scrap	No. 2 Copper Scrap	No. 1 Composition	Heavy Yellow Brass
1958				
Aver.	21.777	20.277	18.653	13.024
1959				
Sept.	26.369	24.869	22.304	16.50
Oct.	27.595	25.405	22.19	16.048
Nov.	29.00	26.208	22.75	16.326
Dec.	28.50	25.993	22.50	16.00
Av.	27.120	25.377	21.567	15.52
1960				
Jan.	29.025	26.30	22.74	16.39
Feb.	28.408	25.75	22.00	16.00
Mar.	27.321	24.038	20.429	15.174
Apr.	27.063	24.256	20.613	15.15
May	26.548	24.369	20.613	15.083
June	26.715	24.455	20.25	15.193
July	27.375	25.075	21.075	15.875
Aug.	27.712	25.81	21.679	15.951
Sept.	26.638	24.888	21.762	16.363
Oct.	24.65	22.90	20.10	15.15

Lead Statistics Reported by American Bureau of Metal Statistics

Lead Refineries in U. S. A. and Outside U. S. A.

(Recoverable Lead Content in Tons of 2,000 Pounds)

Combined U. S. A. and Outside U. S. A.

	REFINED PRODUCTION			DELIVERIES			STOCKS		
		Antimonial Lead			Antimonial Lead			Antimonial Lead	
	Pig	Content	Total	Pig	Content	Total	Pig	Content	Total
1958									
Total ..	1,485,282	106,383	1,591,665	1,307,390	102,697	1,410,087	.....	.....	.....
1959									
Total ..	1,406,485	105,943	1,512,418	1,422,985	106,666	1,529,651	.....	.....	.....
1960									
Feb. ..	127,595	8,977	136,572	121,803	9,539	131,342	287,322	19,719	307,041
Mar. ..	128,203	8,490	136,693	122,013	8,327	130,340	293,512	19,882	313,394
Apr. ..	137,979	7,574	145,553	107,128	7,691	114,819	324,400	19,765	344,165
May ..	130,426	11,126	141,552	125,126	8,556	133,682	329,700	22,335	352,035
June ..	117,093	8,181	125,274	113,103	9,361	122,464	333,690	21,155	354,845
July ..	117,065	9,290	126,355	105,097	7,187	112,284	345,658	23,258	368,916
Aug. ..	112,994	9,157	122,151	127,102	9,474	136,576	331,550	22,941	354,491
Sept. ..	117,297	6,073	123,370	110,602	7,497	118,099	338,245	21,517	359,762
U. S. A.									
1958									
Total ..	473,208	46,985	520,193	589,528	49,893	639,421	.....	.....	.....
1959									
Total ..	343,726	34,628	378,354	596,214	42,312	638,526	.....	.....	.....
1960									
Feb. ..	33,742	2,570	36,312	56,569	2,659	59,228	152,299	12,464	164,763
Mar. ..	35,018	2,070	37,088	40.536	2,289	42,825	158,023	12,399	170,422
Apr. ..	37,465	2,186	39,651	36,572	2,267	38,839	164,875	12,514	177,389
May ..	33,474	3,296	36,770	47,433	2,664	50,097	170,208	13,426	183,634
June ..	31,188	2,094	33,282	46,753	2,921	49,674	169,879	12,837	182,716
July ..	26,906	2,227	29,133	34,595	2,003	36,598	171,825	13,328	185,153
Aug. ..	29,936	2,532	32,468	47,569	2,871	50,440	171,356	13,221	184,577
Sept. ..	27,917	1,600	29,517	39,570	3,365	42,935	171,520	11,533	183,053
Outside U. S. A.									
1958									
Total ..	1,012,074	59,398	1,071,472	717,862	52,804	710,666	.....	.....	.....
1959									
Total ..	1,062,759	71,315	1,134,074	826,771	64,453	891,125	.....	....	.....
1960									
Feb. ..	93,853	6,407	100,260	65,234	6,880	72,114	135,023	7,255	142,278
Mar. ..	93,185	6,420	99,605	81,477	6,038	87,515	135,489	7,483	142,972
Apr. ..	100,514	5,388	105,902	70,556	5,424	75,980	159,525	7,251	166,776
May ..	96,952	7,830	104,782	77,693	5,892	83,585	159,492	8,909	168,401
June ..	85,905	6,087	91,992	66,350	6,440	72,790	163,811	8,318	172,129
July ..	90,159	7,063	97,222	70,502	5,184	75,686	173,833	9,930	183,763
Aug. ..	83,058	6,625	89,683	79,533	6,603	86,136	160,194	9,720	169,914
Sept. ..	89,380	4,473	93,853	71,032	4,132	75,164	166,725	9,984	176,709

* Stocks on Jan. 1, 1960 are not comparable to those reported for Dec. 31, 1959 due to changes in the basis by reporting areas.

Summary of Lead Statistics for United States

Recoverable Lead Content In Tons of 2000 Pounds	Stocks (end of period)					Smelter Receipts			
	Raw Material at Smelter	Base Bullion — At Smelter & Transit	Base Bullion — At Refinery and Process	Refined Pig and Antimonial	Total	Primary Origin — U.S.A.	Primary Origin — Outside U.S.A.	Scrap	Total
1958									
Total	....	....	....	.....	.....	297,687	191,415	29,080	518,182
1959									
Total	.....	....	.....	.....	.....	244,803	125,100	20,596	389,999
1960									
February ...	86,087	2,680	36,748	164,763	290,278	24,719	15,822	2,136	42,677
March	93,108	5,029	36,866	170,422	305,425	29,979	17,105	2,128	49,212
April	89,421	3,639	39,950	177,389	310,399	27,863	9,264	2,207	39,334
May	98,470	4,402	36,979	183,634	323,485	22,537	17,959	2,048	42,544
June	95,364	5,210	39,928	182,716	323,218	20,895	11,717	1,337	33,949
July	93,153	5,234	45,446	185,153	328,986	19,466	11,957	1,285	32,708
August	90,346	5,847	48,304	184,577	329,074	20,002	9,105	1,874	32,981
September ..	96,610	5,643	48,613	183,053	333,919	21,713	13,757	1,945	37,445

1958	Smelter Production	Refined Productions — Pig	Refined Productions — Antimonial	Refined Productions — Total	Deliveries to U. S. Fabricators — imports from Pig	Deliveries to U. S. Fabricators — sources reporting Antimonial	Deliveries to U. S. Fabricators — including to ABMS Total
Total	512,323	473,208	46,985	520,193	589,528	49,893	639,421
1959							
Total	381,656	343,726	34,628	378,354	596,214	42,312	638,526
1960							
February	34,326	33,742	2,570	36,312	56,569	2,659	59,228
March	41,673	35,018	2,070	37,088	40,536	2,289	42,825
April	42,436	37,465	2,186	39,651	36,572	2,267	38.839
May	33,106	33,474	3,296	36,770	47,433	2,264	50,097
June	36,525	31,188	2,094	33,282	46,753	2,921	49,674
July	34,457	26,906	2,227	29,133	34,595	2,003	36,598
August	35,271	29,936	2,532	32,468	47,569	2,871	50,440
September	30,801	27,917	1,600	29,517	39,570	3,365	42,935

United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	Stock At Beginning	Production Primary & Secondary	Total Supply	Stock At End	Domestic Shipments
1954	81,152	551,618	632,770	92,719	475,551
1955	28,855	547,153	639,872	31,089	531,339
1956	.....	613,293	644,382	.....	529,484
1957	.....	604,353	645,534	.....	463,060
1958	....	522,956	614,554	....	380,359
1959					
March	214,946	39,238	254,184	210,524	40,980
April	210,524	40,606	251,130	197,823	52,469
May	197,823	39,101	236,924	171,577	65,207
June	171,577	37,459	209,036	133,235	75,465
July	133,235	32,882	166,117	142,694	22,380
August	142,694	25,589	168,283	124,259	43,850
September	124,259	14,801	139,060	117,296	21,795
October	117,296	18,892	136,188	115,418	20,552
November	115,418	18,796	134,214	114,303	19,869
December	114,303	30,160	144,463	119,993	24,516
Total	....	380,674	579,182	....	450,983
1960					
January	119,993	40,043	160,036	117,589	42,083
February	117,589	36,435	154,024	116,269	37,599
March	116,269	37,192	153,461	109,148	44,076
April	109,148	40,177	149,325	118,329	30,686
May	118,329	36,509	154,838	123,148	31,690
June	123,148	33,448	156,596	129,859	26,725
July	129,859	29,270	159,129	135,858	23,169
August	135,858	32,623	168,481	138,365	30,001
September	138,365	29,638	168,003	138,584	29,406
October	138,584	33,336	171,920	141,338	30,152

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

Industrial Classification of Domestic Lead Shipments

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	Cable	Amm.	Foil	Batt'y	Brass Making	Sundries	Jobbers	Unclassified
1955								
Total	72,418	27,599	2,622	88,461	3,960	52,994	13,034	270,251
1956								
Total	80,360	24,501	1,435	70,614	3,158	56,851	13,213	274,716
1957								
Total	58,444	25,452	1,691	64,761	7,420	53,284	11,127	240,881
1958								
May	3,216	1,850	35	4,671	866	3,071	1,027	15,285
June	3,463	1,950	35	2,767	480	4,217	1,716	17,450
July	3,169	1,250	275	3,936	515	4,157	1,052	17,594
Aug.	3,481	2,415	70	4,992	400	6,399	100	16,397
Sept.	4,132	2,290	320	5,775	848	6,771	1,747	19,774
Oct.	3,243	2,450	...	4,548	285	6,210	1,641	28,270
Nov.	3,690	2,150	50	6,527	360	4,887	322	12,105
Dec.	2,267	2,100	50	6,216	215	2,578	652	10,774
Total	38,838	20,855	1,080	57,180	5,841	51,086	11,882	193,592
1959								
Jan.	2,284	2,100	100	5,594	161	3,545	727	18,524
Feb.	2,988	1,225	50	5,254	735	2,706	931	16,796
Mar.	3,156	1,850	105	5,905	378	6,006	2,185	21,395
April	3,686	2,150	35	7,410	691	5,356	1,966	31,355
May	4,054	2,900	35	6,870	475	7,990	2,843	40,040
June	5,272	3,210	70	12,515	180	8,009	3,663	42,546
July	850	295	70	2,570	315	3,166	997	14,117
Aug.	3,268	1,150	205	3,073	410	6,640	1,921	27,183
Sept.	1,003	....	35	3,401	255	2,296	1,484	13,321
Oct.	700	500	35	4,299	228	2,676	1,021	11,093
Nov.	2,630	200	70	3,714	205	2,566	797	9,687
Dec.	2,133	950	70	3,479	475	2,628	738	14,043
Total	32,024	16,530	880	64,084	4,508	53,584	19,273	260,100
1960								
Jan.	2,138	3,352	105	3,268	550	4,786	1,106	26,778
Feb.	2,665	2,350	50	4,930	295	3,715	574	23,020
Mar.	2,221	1,500	...	8,195	1,050	8,298	2,133	20,679
Apr.	2,005	2,707	83	2,891	380	5,180	916	16,519
May	2,327	1,000	35	4,516	115	4,526	927	18,244
June	2,665	1,500	70	5,043	230	714	690	15,813
July	1,690	1,280	70	3,745	88	2,120	28	14,148
August	2,796	1,692	35	5,873	220	4,603	50	14,732
Sept.	2,049	2,208	35	4,439	469	3,371	255	16,579
Oct.	3,453	1,996	...	4,936	146	3,064	530	16,027

Lead Prices at New York

(Common Grade)
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	16.00	13.00	12.619	12.00
Feb.	16.00	13.00	11.583	12.00
Mar.	16.00	13.00	11.42	12.00
Apr.	16.00	12.00	11.20	12.00
May	15.385	11.712	11.905	12.00
June	14.32	11.24	12.00	12.00
July	14.00	11.00	12.00	12.00
Aug.	14.00	10.85	12.286	12.00
Sept.	14.00	10.89	13.00	12.00
Oct.	13.704	12.673	13.00	12.00
Nov.	13.50	13.00	13.00	...
Dec.	13.00	13.00	12.523	...
Aver.	14.66	12.114	12.211	...

Lead Sheet Prices

(To Jobbers, Full Sheets)
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	21.50	18.50	18.119	17.50
Feb.	21.50	18.50	17.083	17.50
Mar.	21.50	18.50	16.92	17.50
Apr.	21.50	17.50	16.70	17.50
May	20.885	17.212	17.405	17.50
June	19.82	16.74	17.50	17.50
July	19.82	16.50	17.50	17.50
Aug.	19.50	16.35	17.786	17.50
Sept.	19.50	16.39	18.50	17.50
Oct.	19.204	18.173	18.50	17.50
Nov.	19 00	18.50	18.50	...
Dec.	18 50	18.50	18.023	...

Battery Shipments

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers:

(In thousands of units)

	1957	1958	1959	1960
Jan.	2,638	2,004	2,672	1,866
Feb.	1,961	1,803	1,791	1,641
Mar.	1,254	1,577	1,376	1,877
Apr.	1,178	1,242	1,437	1,545
May	1,605	1,454	1,593	1,650
June	1,878	1,773	2,118	2,072
July	2,469	2,101	2,556	2,131
Aug.	2,856	2,333	2,728	2,550
Sept.	2,688	2,704	2,889	2,698
Oct.	3,042	2,976	3,069	....
Nov.	2,359	2,262	2,799	....
Dec.	2,015	3,041	2,465	....
Total	25,943	25,270	27,493	....

Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	In ore and matte and in process at smelteries	—In base bullion (lead content)— At smelteries & refineries	In transit to refineries	In process at refineries	Refined pig lead	Anti-monial lead	Total Stocks
1958							
July 1..	80,060	9,012	1,570	22,092	150,648	12,856	276,238
Aug. 1..	83,347	12,438	860	21,615	154,378	10,482	283,379
Sept. 1.	77,416	14,767	1,176	20,444	158,413	10,889	283,105
Oct. 1..	72,724	14,797	2,223	18,125	159,662	11,004	278,535
Nov. 1..	61,819	11,492	1,086	19,041	157,385	12,050	262,873
Dec. 1..	62,960	11,072	1,565	20,941	167,493	11,828	275,859
1959							
Jan. 1..	72,378	10,917	1,767	19,746	185,513	12,595	303,316
Feb. 1..	72,832	10,565	1,889	21,317	197,085	11,789	315,477
Mar. 1..	62,383	11,707	1,447	21,479	202,835	12,111	311,962
Apr. 1..	68,433	14,352	350	20,575	198,459	12,065	314,234
May 1..	64,538	12,373	624	20,507	184,468	13,355	295,865
June 1..	55,223	12,239	766	20,391	157,981	13,596	260,196
July 1..	58,451	13,270	943	19,468	120,914	12,321	225,367
Aug. 1..	53,115	18,379	158	18,021	129,551	13,143	232,367
Sept. 1.	50,007	17,389	....	15,638	116,344	7,915	207,293
Oct. 1..	61,910	17,925	....	14,932	109,527	7,769	212,063
Nov. 1..	69,429	14,800	...	14,919	107,849	7,569	214,566
Dec. 1..	70,837	12,919	...	15,708	106,678	7,625	213,767
1960							
Jan. 1..	73,381	16,955	3,085	16,914	108,002	11,991	230,328
Feb. 1..	78,315	17,139	1,425	19,003	105,292	12,297	233,471
Mar. 1..	89,656	14,899	1,643	19,360	103,615	12,654	241,827
Apr. 1..	96,716	17,043	867	20,603	96,469	12,679	244,377
May 1..	92,969	16,519	1,581	22,124	105,498	12,831	251,522
June 1..	102,454	12,444	889	24,237	109,270	13,878	263,172
July 1..	99,230	15,371	1,461	24,600	116,638	13,221	270,521
Aug. 1..	96,675	19,414	2,302	25,578	122,130	13,728	279,827
Sept. 1.	93,921	25,290	1,175	24,190	124,711	13,654	282,941
Oct. 1..	100,073	27,328	2,106	21,471	126,696	11,888	289,562

Receipts of Lead in Ore and Scrap

By U. S. Smelters (a)

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	——Receipts of lead in ore—— United States	Foreign	Total	Receipts of lead in scrap etc. (b)	Total receipts in ore, & scrap
1953 Total	**351,183**	**155,788**	**506,971**	**42,994**	**549,965**
1954 Total	**336,291**	**158,081**	**494,372**	**49,864**	**544,236**
1955 Total	**341,595**	**172,966**	**514,561**	**42,996**	**557,557**
1956 Total	368,499	192,318	560,817	55,925	616,792
1957 Total	356,409	206,901	563,310	42,537	605,847
1958					
July	**22,289**	**19,692**	**41,891**	**1,615**	**43,596**
August	22,984	13,043	36,027	1,252	37,279
September	20,654	14,576	35,230	1,765	36,995
October	18,678	9,093	27,771	3,577	31,348
November	24,024	14,541	38,565	3,933	42,498
December	24,366	18,804	43,170	3,982	47,152
Total	285,164	188,144	473,308	30,115	503,423
1959					
January	24,304	19,449	43,753	3,138	46,891
February	22,253	8,660	30,913	1,747	32,660
March	21,897	21,012	42,909	1,328	44,237
April	22,339	10,998	33,337	1,196	34,533
May	21,645	5,202	26,847	1,930	28,777
June	23,634	12,368	36,002	2,431	38,433
July	19,165	11,695	30,860	2,199	33,059
August	19,971	2,821	22,792	1,009	23,801
September	13,591	3,465	17,056	32	17,088
October	14,740	3,648	18,388	133	18,521
November	13,808	4,582	18,390	133	18,523
December	21,208	20,977	42,185	5,269	47,454
Total	238,555	124,877	363,432	20,545	383,977
1960					
January	20,531	26,307	46,838	2,041	48,879
February	23,700	15,541	39,241	2,439	41,680
March	28,824	16,742	45,566	2,404	47,970
April	26,574	9,243	35,817	2,212	38,029
May	21,674	16,679	38,353	2,812	41,165
June	20,248	11,694	31,942	2,580	34,522
July	18,831	11,252	30,083	2,237	32,320
August	21,515	8,952	30,467	2,324	32,791
September	24,896	12,192	37,088	2,140	39,228

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably underrun the actual production of pig lead. (b) inclusive only of scrap smelted in connection with ore, plus some scrap received by primary refiners.

N. Y. Lead Price Changes

(Effective Date)

1951		Apr. 12	14.00
Oct. 2	****19.00**	June 2	14.25
1952		June 15	14.00
Apr. 29	18.00	Aug. 25	14.25
May 2	17.00	Sept. 7	14.50
May 12	15.00	Sept. 15	14.75
June 23	15.50	Oct. 4	14.875
June 24	16.00	Oct. 5	15.00
Oct. 7	15.00	**1955**	
Oct. 14	14.00	**Sept. 23**	**15.00-15.50**
Oct. 22	13.50	**Sept. 26**	**15.50**
Nov. 3	14.00	Dec. 29	16.00
Nov. 10	14.20	**1956**	
Nov. 11	14.50	Jan. 4	16.50
Nov. 20	**14.25**	Jan. 13	16.00
Nov. 24	14.00	**1957**	
Dec. 22	**14.25**	**May 9**	**15.50**
Dec. 29	14.50	**May 16**	**15.00**
Dec. 31	14.75	June 11	14.00
1953		Oct. 14	13.50
Jan. 7	14.50	Dec. 2	13.00
Jan. 12	14.00	**1958**	
Feb. 2	13.50	Apr. 1	12.00
Mar. 4	**13.00**	May 14	11.50
Mar. 10	**13.50**	June 3	11.00
Apr. 7	**13.00**	**June 18**	**11.50**
Apr. 16	**12.50**	**July 1**	**11.00**
Apr. 21	12.00	Aug. 13	10.75
Apr. 29	12.50	**Sept. 17**	**11.00**
May 18	12.75	Sept. 30	11.50
May 19	**13.00**	Oct. 2	12.00
May 26	**13.15**	Oct. 8	12.50
June 11	13.50	Oct. 14	13.00
July 20	**13.75**	**1959**	
July 23	**14.00**	**Jan. 21**	**12.00**
Sept. 16	13.50	Feb. 11	11.50
1954		Feb. 24	11.00
Jan. 18	13.00	Mar. 5	11.50
Feb. 18	12.50	April 1	11.00
Mar. 9	**12.75**	April 20	11.50
Mar. 10	**13.00**	May 7	12.00
Mar. 26	**13.25**	Aug. 24	13.00
Mar. 29	13.50	Dec. 14	12.50
Apr. 1	13.75	Dec. 21	12.00

**OPS Ceiling.

Antimonial Lead Stocks at Primary Refineries

(A.B.M.S.)

(In tons of 2,000 pounds)

End of	1957	1958	1959	1960
Jan.	10,487	12,689	11,789	12,297
Feb.	10,220	12,309	12,111	12,654
Mar.	5,091	3,527	4,098	2,332
Apr.	9,391	12,468	13,355	12,831
May	9,799	13,154	13,596	13,878
June	9,503	12,856	12,321	13,221
July	8,661	10,482	13,143	13,728
Aug.	9,553	10,889	7,915	13,654
Sept.	10,215	11,004	7,769	11,888
Oct.	11,581	12,050	7,569	11,540
Nov.	11,119	11,828	7,625	....
Dec.	11,857	12,595	11,991	....

Antimonial Lead Production by Primary Refineries

(A.B.M.S.)

(In tons of 2,000 pounds)

End of	1957	1958	1959	1960
Jan.	5,114	3,743	3,541	2,538
Feb.	5,468	3,657	4,415	2,694
Mar.	9,794	12,144	12,065	12,679
Apr.	6,183	3,655	5,533	2,291
May	6,978	4,827	4,616	3,456
June	4,466	3,992	5,671	2,260
July	5,372	2,775	2,784	2,363
Aug.	7,967	5,244	2,185	2,701
Sept.	7,574	4,761	102	1,721
Oct.	6,148	5,849	886	3,205
Nov.	3,791	3,913	1,324	....
Dec.	3,290	4,539	2,656	....
Total	**67,541**	**50,482**	**37,813**	....

Lead Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

	1960		
	June	July	Aug.
IMPORTS			
U. S.* (s.t.)	16,929	20,185	24,264
Canada (s.t.)	601	...	...
Belgium	1,197	...	...
Denmark	2,353	510	1,078
France	3,059	5,368	4,881
Germany, W.‡	8,430	8,495	...
Italy††	1,423	...	...
Netherlands	3,635	2,061	2,793
Norway	2,187	...	...
Sweden	880	430	...
Switzerland	1,490	1,977	1,609
U. K. (l.t.)	15,490	20,087	20,888
India† (l.t.)	1,218	...	...
EXPORTS			
U. S.* (s.t.)	382	18	46
Canada (s.t.)	9,521	7,955	9,080
Belgium	2,920	...	...
Denmark	6	29	276
France	616	328	536
Germany, W.‡	1,534	2,485	...
Netherlands	669	514	833
Sweden	7,425	576	...
Northern Rhodesia† (l.t.)	985	1,024	1,368
Australia (l.t.)	11,106	...	...

* Refined.
†† Includes lead alloys.
‡ Includes scrap.
† British Bureau of Non-Ferrous Metal Statistics.

French Lead Imports

(A. B. M. S.)

(In metric tons)

	1960		
	July	Aug.	Sept.
Ore (gross weight)	6,543	7,580	9,194
Canada	988	...	...
Algeria	...	...	70
Morocco	5,555	6,186	9,124
Other countries	...	1,394	...
Pig lead	5,368	4,881	2,726
Peru	...	...	102
Belgium	1,128	1,517	997
Germany (W.)	632	517	500
Spain	...	...	100
Algeria	711	...	6
Morocco	1,223	1,114	325
Tunisia	1,394	1,733	417
Australia	280	...	279
Antimonial lead	501	17	1

U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 tons)

	1960		
	July	Aug.	Sept.
(Gross Weight) Lead and lead alloys	20,087	20,888	16,442
Australia	11,574	13,962	10,263
Canada	4,779	4,037	2,845
Peru	750	750	699
Other countries	2,984	2,139	2,635

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ADVERTISE
in the
DAILY METAL REPORTER

U. S. Lead Consumption

(Bureau of Mines — in Short Tons)

	1960		
Metal Products:	Jan.-Aug.	July	August
Ammunition	29,153	3,171	3,026
Bearing metals	14,228	1,352	1,749
Brass and bronze	13,850	1,108	1,753
Cable covering	40,273	3,270	5,293
Calking lead	46,373	6,058	7,003
Casting metals	4,630	546	590
Collapsible tubes	5,186	428	749
Foil	2,698	317	287
Pipes, traps, and bends	15,730	1,887	1,989
Sheet lead	18,374	1,929	2,850
Solder	39,264	4,369	4,630
Storage battery grids, posts, etc.	112,245	12,228	14,708
Storage battery oxides	116,752	12,616	15,231
Terne metal	1,580	212	199
Type metal	17,212	1,892	2,138
Total	**477,548**	**51,383**	**62,195**
Pigments:			
White lead	5,790	594	777
Red lead and litharge	52,859	5,728	6,732
Pigment colors	7,952	625	1,047
Other*	1,761	230	282
Total	**68,362**	**7,177**	**8,838**
Chemicals:			
Tetraethyl lead	109,219	14,327	15,132
Miscellaneous chemicals	1,482	142	463
Total	**110,701**	**14,469**	**15,595**
Miscellaneous uses:			
Annealing	3,079	215	366
Galvanizing	874	76	89
Lead plating	37	....	2
Weights and ballast	4,925	518	600
Total	**8,915**	**809**	**1,057**
Other uses unclassified	11,327	952	1,244
Total reported†	**676,853**	**74,790**	**88,929**
Estimated unreported consumption	16,000	2,000	2,000
Grand total†	**692,900**	**76,800**	**90,900**
Daily average‡	**2,839**	**2,477**	**2,932**

* Includes lead content of leaded zinc oxide production.
† Includes lead content of scrap used directly in fabricated products.
‡ Based on number of days in month without adjustment for Sundays and holidays.

U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 pounds)

	1958	1959	1960
Jan.	29,607	28,872	31,745
Feb.	27,855	25,968	30,241
Mar.	29,713	26,691	35,066
Apr.	26,230	29,252	28,148
May	28,839	27,280	33,459
June	28,624	30,099	33,318
July	27,201	26,851	27,913
Aug.	21,726	25,358	28,735
Sept.	28,829	30,255	34,274
Oct.	31,356	32,926	...
Nov.	27,786	32,579	...
Dec.	27,154	31,772	...
Total	**335,920**	**345,903**	

American Antimony

Monthly Average Prices
In bulk, f.o.b. Laredo
(Cents per lb. in ton lots)

	1957	1958	1959	1960
Jan.	33.00	33.00	29.00	29.00
Feb.	33.00	30.818	29.00	29.00
Mar.	33.00	29.00	29.00	29.00
Apr.	33.00	29.00	29.00	29.00
May	33.00	29.00	29.00	29.00
June	33.00	29.00	29.00	29.00
July	33.00	29.00	29.00	29.00
Aug.	33.00	29.00	29.00	29.00
Sept.	33.00	29.00	29.00	29.00
Oct.	33.00	29.00	29.00	29.00
Nov.	33.00	29.00	29.00	...
Dec.	33.00	29.00	29.00	...
Aver.	**33.00**	**29.485**	**29.00**	...

Consumers' Lead Stocks, Receipts and Consumption

(Bureau of Mines — In Short Tons)

	Stocks July 31, 1960	Net Receipts in Aug.	Consumed in Aug.	Stocks Aug. 31, 1960
Soft lead	74,431	63,225	60,451	77,205
Antimonial lead	42,991	20,235	20,460	42,766
Lead in alloys	7,365	3,013	2,898	7,480
Lead in copper-base scrap	978	1,341	1,395	924
Total	125,765	87,814	*85,204	128,375

* Excludes 3,468 tons of lead which went directly from scrap to fabricated products and 257 tons of lead contained in leaded zinc oxide production.

Consumption of Lead by Class of Product

(Bureau of Mines — In Short Tons)

AUGUST

	Soft lead	Antimonial lead	Lead in alloys	Lead in copper-base scrap	Total
Metal products	34,521	19,945	2,866	1,395	58,727
Pigments	8,556	25	....	....	8,581
Chemicals	15,595	....	....	....	15,595
Miscellaneous	609	424	24	....	1,057
Unclassified	1,170	66	8	....	1,244
Total	60,451	20,460	2,898	1,395	*85,204

* Excludes 3,468 tons of lead which went directly from scrap to fabricated products and 257 tons of lead contained in leaded zinc oxide production.

Domestic Zinc Statistics

American Zinc Institute

Commencing with January, 1948, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign ores also is included.

(Tons of 2,000 lbs.)

	Stock Beginning	Production	Shipments: Domestic	Export & Drawback	Gov't Acc't	Total	Stock at End	Daily Avg. Prod.
1950 Tl.	94,221	910,354	849,246	18,189	128,256	995,691	8,884	2,494
1950 Mo. Avg.		75,863	70,770	1,516	10,688	82,974		
1951 Total	8,884	931,833	836,800	42,067	39,949	918,816	21,901	2,553
1951 Mo. Avg.		77,653	69,733	3,506	3,329	76,568		
1952 Total	21,901	961,430	803,343	56,202	36,626	896,171	87,160	2,627
1952 Mo. Avg.		80,119	66,945	4,683	3,052	74,681		
1953 Total	87,160	971,191	818,850	16,326	42,332	877,508	180,843	2,661
1953 Mo. Avg.		80,933	68,238	1,361	3,528	73,126		
1954 Total	180,843	868,242	787,922	27,929	108,957	924,808	124,277	2,379
1954 Mo. Avg.		72,353	65,660	2,327	9,080	77,067		
1955 Total	40,979	1,031,018	1,007,619	19,497	87,200	1,114,316	40,979	2,825
1955 Mo. Avg.		85,918	83,968	1,625	7,267	92,860		
1956 Total		1,062,954	869,270	9,027	157,014	1,035,311	68,622	2,904
1956 Mo. Avg.		88,850	72,439	752	13,085	86,275		
1957 Total		1,067,450	765,132	15,460	179,466	815,567		
1958								
August	257,911	62,927	68,718	591	....	69,309	251,529	2,030
September	251,529	63,705	76,905	213	....	77,118	238,116	2,124
October	238,116	65,304	93,018	226	....	93,224	210,176	2,107
November	210,176	65,174	83,394	212	....	83,606	191,744	2,172
December	191,744	75,503	76,862	148	....	77,010	190,237	2,432
1958 Total		828,902	767,755	3,102	34,488	805,325	....	....
1959								
January	190,237	76,481	70,770	171	....	70,941	195,777	2,467
February	195,777	71,174	65,641	849	....	66,490	200,461	2,542
March	200,461	79,918	73,814	482	....	74,296	206,083	2,578
April	206,083	76,393	78,358	255	....	78,613	203,863	2,546
May	203,863	77,489	85,073	275	....	85,348	196,004	2,500
June	196,004	75,544	99,858*	204	2,100	102,162	169,386	2,518
July	169,386	73,101	59,460	94	900	60,454	182,033	2,358
August	182,033	69,768	58,918	864	....	59,782	192,019	2,251
September	192,019	62,202	57,971	3,214	....	61,185	193,036	2,073
October	193,036	63,938	63,910	1,813	....	65,723	191,251	2,063
November	191,251	62,346	74,596	2,844	....	77,440	176,157	2,078
December	176,157	69,666	84,498	6,906	....	91,404	154,419	2,247
1959 Total		858,020	872,867	17,971	3,000	893,838	....	....
1960								
January	154,419	73,326	79,325	3,949	....	83,274	144,471	2,365
February	144,471	74,738	78,029	4,118	....	82,147	137,062	2,577
March	137,062	86,028	80,760	5,764	....	86,524	136,566	2,775
April	136,566	83,221	64,251	7,675	....	71,926	147,861	2,774
May	147,861	79,216	54,790	7,399	....	62,039	165,038	2,555
June	165,038	76,723	50,690	3,385	....	54,075	187,686	2,557
July	187,686	73,754	50,002	4,379	....	54,381	207,059	2,379
August	207,059	63,840	64,287	5,908	....	70,255	200,644	2,128
September	200,644	60,004	58,137	10,045	....	68,182	192,466	2,000
October	192,466	63,005	58,572	6,611	....	65,183	190,288	2,032

* Inflated by abnormal shipments on consignment of approximately 9,000 tons.

U. S. Consumption of Slab Zinc

Bureau of Mines

By Industries (Short Tons)

	Galvanizers	Die Casters	Brass products	Rolled zinc	Zinc oxide & other	Total
1951 Total	386,373	266,442	141,456	64,000	28,738	887,009
1952 Total	375,563	236,022	155,311	51,508	30,885	849,289
1953 Total	403,162	305,846	177,801	58 784	38,037	977,636
1954 Total	398,599	286,817	107,293	45,979	33,342	876,130
1955 Total	439,694	404,790	144,816	50,363	39,302	1,081,468
1956 Total	421,218	352,451	122,395	45,382	36,251	983,097
1957 Total	355,796	358,543	111,114	39,544	20,486	924,063
1958						
July	30,677	17,387	6,275	2,848	1,920	60,007
August	34,663	20,382	8,358	3,379	1,901	70,033
September	34,048	25,188	9,624	3,458	770	74,122
October	36,513	27,682	11,753	3,845	881	81,919
November	31,658	27.311	10.067	3,276	826	74.302
December	31,746	29,926	10,529	3,681	1,018	78,082
Total	370,441	273,540	92,906	38,690	16,772	737,942
1959						
January	31,729	29,110	11,172	3,874	2,521	79,506
February	31,672	26,448	11,508	3,418	2,864	77,010
March	37,287	29,286	12,889	3,629	3,203	87,394
April	38,541	31,262	12,304	3,715	3,223	90,145
May	38,788	29,169	12,015	3,316	3,305	88,093
June	40,531	36,269	10,764	3,801	3,120	95,985
July	23,700	28,120	7,558	2,509	2,042	65,429
August	13,763	29.803	10.064	3.160	2.161	60.451
September	13,181	31,463	10,842	3,322	2,237	62,545
October	13,582	35,473	10,543	3.272	2,487	66,857
November	25,456	29,351	8,858	3,411	2,523	71,099
December	38,418	34,576	8,704	3,152	2,936	89,286
Total	346,648	370,330	127,221	40,759	22,622	933,800
1960						
January	38,389	31,813	9,838	3,130	3,352	88,122
February	35,001	34,829	9,259	3,250	3,156	87,365
March	36,206	31,889	10,108	3,309	3,403	86,515
April	31,319	24,483	7,097	3,032	3,033	71,164
May	31,503	22,957	7,697	3,402	3,386	70,545
June	31,882	25,625	8,541	3,181	2,814	73,883
July	24,735	18,895	4,610	2,118	2,979	55,237
August	28,157	25,560	8,307	3,258	1,331	68,513

Prime Western Zinc Prices

(East St. Louis, f.o.b.)

(Cents Per Pound)
(In tons of 2,240 pounds)

	1957	1958	1959	1960
Jan.	13.50	10.00	11.50	12.90
Feb.	13.50	10.00	11.411	13.00
Mar.	13.50	10.00	11.00	13.00
Apr.	13.50	10.00	11.00	13.00
May	11.933	10.00	11.00	13.00
June	10.84	10.00	11.00	13.00
July	10.00	10.00	11.00	13.00
Aug.	10.00	10.00	11.00	13.00
Sept.	10.00	10.00	11.381	13.00
Oct.	10.00	10.865	12.233	13.00
Nov.	10.00	11.386	12.50	...
Dec.	10.00	11.50	12.50	...
Aver.	**11.40**	**10.313**	**11.46**	...

High Grade Zinc Prices

(Delivered)
N. Y. Monthly Averages
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	14.85	11.35	12.50	14.244
Feb.	14.85	11.35	12.411	14.25
Mar.	14.85	11.35	12.00	14.25
Apr.	14.85	11.084	12.00	14.50
May	13.283	11.00	12.00	14.50
June	12.19	11.00	12.00	14.50
July	11.35	11.00	12.00	14.35
Aug.	11.35	11.00	12.006	14.35
Sept.	11.35	11.00	12.625	14.35
Oct.	11.35	11.865	13.483	14.35
Nov.	11.35	12.386	13.75	...
Dec.	11.35	12.50	13.75	...
Aver.	**12.75**	**11.407**	**12.544**	...

U. K. Zinc Consumption

(British Bureau of Non-Ferrous Metal Statistics)
(In Tons of 2,240 Pounds)

	1958	1959	1960
Jan.	27,473	27,849	30,637
Feb.	24,551	25,676	30,480
Mar.	26,967	27,243	35,268
Apr.	24,984	28,006	28,069
May	24,579	26,167	30,848
June	25,587	30,221	33,058
July	23,794	26,318	25,594
Aug.	19,076	21,566	25,764
Sept.	26,747	31,270	33,163
Oct.	29,838	30,686	...
Nov.	26,432	29,221	...
Dec.	26,042	30,829	...
Total	**306,070**	**335,890**	...

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DAILY METAL REPORTER

Mine Production of Zinc in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern States	Central States	Western States	Total U.S.*
1954				
Total	166,487	63,100	234,942	464,539
1955				
Total	163,230	73,630	277,811	514,671
1956				
Total	175,310	61,080	301,253	537,643
1957				
Total	196,877	29,506	290,151	520,128
1958				
Total	180,373	10,050	221,582	412,005
1959				
May	19,150	——	19,201	38,351
June	18,217	——	18,447	36,664
July	13,158	——	18,656	31,814
Aug.	14,410	140	16,661	31,211
Sept.	14,226	154	15,026	29,406
Oct.	15,608	200	15,979	31,487
Nov.	18,285	200	15,698	34,183
Dec.	19,609	106	15,757	35,472
Total	204,384	800	211,781	416,965
1960				
Jan.	20,962	226	15,795	36,983
Feb.	21,001	195	16,823	38,019
Mar.	22,794	347	19,725	42,866
Apr.	22,410	606	17,839	40,855
May	23,103	408	17,235	40,746
June	22,004	575	16,491	39,070
July	21,083	823	15,036	36,942
Aug.	18,805	902	13,704	33,411
Sept.	16,525	853	12,802	30,180

*Includes Alaskan output in some months.

Mine Production of Lead in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern States	Central States	Western States	Total U.S.*
1953				
Ttl.	9,970	136,650	188,776	335,412
1954				
Ttl.	8,608	138,940	169,804	317,352
1955				
Ttl.	10,379	145,640	177,409	333,409
1956				
Ttl.	11,395	141,900	195,034	348,329
1957				
Ttl.	9,300	135,800	188,392	333,493
1958				
Ttl.	6,439	118,114	142,824	267,377
1959				
June	458	8,185	12,764	21,407
July	369	8,190	11,010	19,569
Aug.	353	9,762	11,735	21,850
Sept.	510	9,698	10,328	20,536
Oct.	548	10,012	10,755	21,315
Nov.	620	9,350	10,954	20,924
Dec.	550	8,734	10,572	19,856
Ttl.	6,535	105,435	141,290	253,260
1960				
Jan.	535	9,035	11,235	20,805
Feb.	555	9,611	12,267	22,433
Mar.	619	11,146	13,695	25,460
Apr.	647	9,716	12,750	23,113
May	624	9,395	10,720	20,738
June	585	9,749	9,002	19,356
July	598	8,301	8,462	17,361
Aug.	...	...	...	18,460
Sept.	...	...	...	17,672

Mine Production of Gold in United States

(U. S. Bureau of Mines)

(In fine ounces)

	Eastern States	Western States	Alaska*	Total
1955				
Ttl.	2,026	1,634,625	247,535	1,884,186
1956				
Ttl.	1,998	1,607,930	204,300	1,814,228
1957				
Ttl.	2,174	1,556,450	210,000	1,768,624
1959				
June	—	——	23,792	163,057
July	—	——	33,324	171,749
Aug.	—	——	37,534	146,907
Sept.	—	——	30,886	114,364
Oct.	—	——	29,349	117,314
Nov.	—	——	2,903	91,175
Dec.	—	——	17,294	106,525
Ttl.	—	——	188,294	1,618,446
1960				
Jan.	—	——	2,460	——
Feb.	—	——	1,064	108,652
Mar.	—	——	231	120,928
Apr.	—	——	43	121,017
May	—	——	4,919	141,861
June	—	——	5,504	140,058
July	—	——	28,493	156,573
Aug.	—	——	33,033	153,163
Sept.	—	——	35,480	175,374

* Alaska totals based on mint and smelter receipts.

Mine Production of Recoverable Silver in United States

(U. S. Bureau of Mines)

(In Fine Ounces)

	Eastern States	Missouri	Western States	Alaska*	Total
1957 Total	610,386	240,000	37,018,950	26,000	37,895,336
1958 Total	†	210,000	†	28,000	33,022,225
1959					
July	†	8,900	†	4,149	2,905,320
August	†	10,600	†	5,523	2,291,540
September	†	10,400	†	3,224	1,794,029
October	†	10,900	†	3,793	1,952,629
November	†	10,400	†	469	1,874,624
December	†	10,140	†	2,334	1,825,198
Total	†	169,000	†	24,134	30,349,334
1960					
January	†	18,300	†	321	1,962,523
February	†	200	†	312	2,370,150
March	†	100	†	17	2,858,903
April	†	100	†	5	2,989,208
May	†	100	†	627	2,802,172
June	†	200	†	753	2,348,591
July	†	200	†	4,033	2,480,343
August	†	200	†	5,004	2,460,567
September	†	200	†	4,764	2,529,765

† Figures not available. * Alaska totals based on mint and smelter receipts.

U. S. Silver Production*

(A.B.M.S.)

(In thousands of ounces; commercial bars, 0.999 fine, and other refined forms)

	Dom.†	For.	Total
1954 Total	38,059	39,422	77,481
1955 Total	33,101	32,780	65,881
1956 Total	38,157	40,160	78,317
1957 Total	36,279	34,932	71,211
1958 Total	35,691	37,572	73,263
1959			
April	2,946	3,233	6,179
May	2,641	3,484	6,125
June	3,219	3,231	6,450
July	2,609	3,284	5,893
August	1,472	1,229	2,701
September	390	577	967
October	510	610	1,120
November	635	602	1,237
December	756	4,311	5,067
Total	23,158	32,021	55,179
1960			
January	3,327	2,830	6,157
February	3,454	3,496	6,950
March	4,010	4,259	8,269
April	3,866	4,158	8,024
May	3,425	4,018	7,443
June	3,278	3,924	7,202
July	2,817	3,799	6,616
August	3,115	4,293	7,408
September	2,145	2,872	5,287

* The separation between silver of foreign and domestic origin on the basis of refined bars and other refined forms is only approximate.

† Includes purchases of crude silver by the U. S. Mint.

Production of Primary Aluminum in the U. S.

(U. S. Bureau of Mines)

(In short tons)

	1953	1954	1955	1956	1957	1958	1959	1960
Jan.	89,895	116,247	128,203	140,394	147,029	139,910	156,708	164,024
Feb.	92,649	110,483	116,236	132,763	119,059	121,980	142,116	156,826
Mar.	104,460	122,339	130,272	145,895	135,706	134,019	157,189	170,688
Apr.	102,071	120,434	126,394	144,726	139,152	128,559	155,213	168,596
May	105,464	125,138	131,128	150,800	145,174	129,083	163,857	175,863
June	104,152	120,758	127,634	145,726	138,007	115,325	167,323	171,356
July	109,285	126,161	132,669	151,624	142,157	118,811	179,594	177,564
Aug.	110,545	125,296	133,551	92,406	143,449	125,416	172,817	172,973
Sept.	109,333	120,332	130,606	132,316	129,278	124,713	168,205	162,882
Oct.	108,219	125,089	134,655	149,125	133,759	139,847	173,762	167,015
Nov.	105,636	121,252	133,689	145,081	135,024	140,962	153,666	....
Dec.	110,291	127,056	140,748	148,391	140,033	153,301	162,996	....
Ttl.	1,252,013	1,460,565	1,565,721	1,679,427	1,647,710	1,655,556	1,953,019	....

Average Silver Prices

(Cents per fine ounce)

	1957	1958	1959	1960
Jan.	91.375	89.449	90.19	91.375
Feb.	91.375	88.625	90.444	91.375
Mar.	91.375	88.625	91.351	91.375
Apr.	91.375	88.625	91.375	91.375
May	91.307	88.625	91.375	91.375
June	90.456	88.625	91.375	91.375
July	90.31	88.625	91.375	91.375
Aug.	90.909	88.625	91.399	91.375
Sept.	90.602	88.673	91.399	91.375
Oct.	90.625	89.966	91.375	91.375
Nov.	90.382	90.125	91.375	...
Dec.	89.80	89.932	91.375	...
Aver.	90.824	89.043	91.226	...

Note — The averages are based on the price of refined bullion imported on or after August 31, 1943.

U. S. Lead Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	July	Aug.	Sept.
Ore, matte, etc. (cont.)	13,183	11,428	16,102
Canada	3,561	1,508	1,945
Mexico	44	104	149
Guatemala	...	...	176
Honduras	434	520	457
Bolivia	1,326	1,179	1,128
Chile	28	79	...
Peru	3,976	1,916	4,086
Union of South Africa	...	4,486	7,957
Australia	3,771	1,612	12
Philippines	17	...	5
Korea	...	...	175
Other countries	26	24	12
Pigs and bars	20,185	24,264	8,766
Canada	3,363	2,945	50
Mexico	4,638	8,006	4,673
Peru	200	2,196	4,043
Germany (West)	237	...	...
Spain	710	...	...
Yugoslavia	1,314	6,672	...
Australia	9,723	4,445	...
Total Imports:			
Ore, base bullion, ref.	33,368	35,692	24,868
Lead scrap, dross, etc. (cont.)	795	553	213
Antimonial lead and typemetal	98	459	364
Lead content thereof	76	363	293

U. S. Copper Scrap Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	July	Aug.	Sept.
Copper scrap, unalloyed* (new and old)	6,842	5,996	5,033
Canada	149	111	315
Belgium	508	445	336
France	93	60	66
Germany (West)	2,9°0	1,929	845
Italy	3s7	286	161
Netherlands	258	160	151
Spain	248	954	585
Sweden	..	502	201
Yugoslavia	849	435	58
United Kingdom	333	191	300
India	122	91	111
Japan	847	751	1,802
Other countries	98	81	102
Copper-base scrap, alloyed† (new and old)	12,546	13,611	12,537
Canada	112	21	3
Mexico	2	188	64
Belgium	162	...	...
France	23	...	11
Germany (West)	1,538	1,321	671
Italy	1,037	1,106	845
Netherlands	1,219	337	36
Spain	28	...	55
Switzerland	137	99	78
United Kingdom	73	115	69
India	195	182	223
Japan	7,902	10,242	10,441
Hong Kong	...	...	16
Other countries	118	...	25

* Ash, brassmill, clippings, dross, flue dust, residues, scale, skimmings, wire scrap.

† Copper-base alloys, including brass and bronze — Ashes, clippings for remanufacture, cupro-nickel scrap, cupro-nickel trimmings, nickel silver scrap, phosphor bronze, phosphor copper, skimmings, turnings, round.

U. S. Copper Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	July	Aug.	Sept.
Ore, matte and regulus (content)	8,330	4,036	7,105
Canada	968	1,238	545
Mexico	129	109	2
Cuba	420	...	...
Bolivia	421	...	198
Chile	2,473	1,311	1,221
Peru	1,853	321	1,069
Philippines	1,980	1	2,341
Union of South Africa	...	933	1,729
Australia	77	121	...
Other countries	9	2	...
Blister copper (content)	19,129	41,712	21,323
Mexico	1,474	2,185	2,098
Chile	11,330	28,120	15,127
Peru	5,050	10,574	2,434
Union of South Africa	1,275	833	1,664
Refined cathodes and shapes	6,818	8,975	7,675
Canada	5,793	8,668	7,675
Mexico	275	...	...
Peru	694	251	...
Belgium	56	...	...
Rhodesia & Nyasaland	...	56	...
Total Imports:			
Crude and refined	34,277	54,723	36,103
Old and scrap (cont.)	164	235	24
Composition metal (content)	195	...	1
Brass scrap and old (cu. cont.)	221	227	123

U. S. Copper Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	July	Aug.	Sept.
Ore, concentrates, matte and other unrefined (content)	47	255	1,524
Refined ingots, bars, etc.*	45,020	58,720	42,919
Canada	95	35	157
Mexico	16	...	2
Argentina	759	2,604	1,475
Brazil	1,532	1,336	1,565
Austria	3	...	3
Belgium	168	672	336
Denmark	168	252	167
Finland	220	783	529
France	4,601	10,742	6,502
Germany (West)	12,336	12,474	9,029
Greece	280	...	112
Italy	6,412	7,488	5,999
Netherlands	1,842	2,490	1,987
Norway	224	280	336
Sweden	294	622	168
Switzerland	1,061	1,398	616
United Kingdom	12,209	10,126	7,793
Yugoslavia	...	1,566	792
Taiwan	...	535	161
India	30	1,670	151
Japan	2,552	2,956	4,128
Australia	246	559	896
Other countries	8	132	15
Total Exports:			
Crude and refined	45,067	58,975	44,443
Pipes and tubes	84	47	105
Plates and sheets	112	31	58
Semifabricated forms	464	769	601
Wire, bars	407	306	163
Building wire and cable†	208	76	259
Weatherproof wire†	1	2	1
Insulated copper wire n.e.s.†	1,178	3,184	382

* Includes exports of refined copper resulting from scrap that was reprocessed on toll for account of the shipper.

† Gross weight; n.e.s.—not elsewhere specified.

Comparative Metal Prices

	Av. 1939	OPA Av. 1946	1960 Nov. 24
Copper, domestic Electro., del. Val.	11.20	14.375	30.00
Lead (N. Y.)	5.05	8.25	12.00
P. W. Zinc (E. St. Louis, f.o.b.)	5.05	5.05	13.00
New York, del.	...	...	13.50
Tin Spot Straits, N. Y.	...	...	103.00
Aluminum ingot 99½%+	20.00	15.00	26.00
Antimony (R.M.M. brand f.o.b. Laredo)	12.36	14.50	29.00

U. S. Zinc Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	July	Aug.	Sept.
Zinc ore (content)	35,689	35,632	40,558
Canada	9,212	11,508	9,200
Mexico	12,750	17,489	12,138
Guatemala	2,849	...	1,744
Honduras	...	461	633
Bolivia	20	52	188
Chile	...	3	...
Peru	4,789	4,128	10,729
Union of South Africa	...	643	1,038
Australia	5,439	502	4,201
Philippines	617	835	664
Other countries	13	11	23
Zinc blocks, pigs, etc.	3,692	8,134	17,272
Canada	1,865	5,625	10,854
Mexico	...	686	500
Peru	...	170	1,709
Belgium	...	...	112
Germany (West)	...	...	110
Italy	386	496	...
United Kingdom	...	...	56
Yugoslavia	992	716	551
Belgian Congo	...	441	2,002
Australia	449	...	...
Spain	...	...	1,378
Total Imports:			
Zinc ore, blocks, pigs	39,381	43,766	57,830
Dross and skimmings	93	112	107
Old and worn out	...	16	...

U. S. Zinc Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	July	Aug.	Sept.
Ore, conc. (cont.)	1	1	1
Slabs, blocks, etc.	2,385	7,601	9,110
Canada	...	1	2
Mexico	39	132	39
Cuba	...	55	...
Brazil	449	172	302
Colombia	...	265	...
Belgium	...	...	3
Germany (West)	...	112	...
Italy	...	336	...
Netherlands	224	224	168
Sweden	308	700	616
United Kingdom	448	3,659	327
Philippines	...	435	...
Japan	...	...	7,405
India	801	1,225	192
Other countries	116	285	56
Total Exports:			
Ore, conc., slabs	2,386	7,602	9,111
Scrap, ashes, dross and skimmings	951	2,032	1,426
Battery shells and parts, unassembled	1	...	...
Rolled in sheets, plates & strips & die castings	212	137	238
Zinc and zinc alloys in crude and semifabricated forms	380	369	146
Zinc oxide	170	171	202

U. S. Lead Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1960		
	July	Aug.	Sept.
Lead, ore, concentrates, matte and base bullion (content)	...	9	1,114
Mexico	...	9	14
Other countries	...	...	1,100
Pigs and bars	18	46	56
Canada	2	...	1
Mexico	2	2	32
Cuba	...	...	7
Guatemala	...	33	...
Colombia	...	...	3
Peru	...	4	1
Taiwan	7	...	...
Korea	2	...	...
Other countries	5	7	12
Total Exports:			
Ore, base bullion, ref.	18	55	1,170
Scrap	211	32	355
Lead plate, including battery plate, not assembled as complete battery units	2	1	33
Babbitt metal	3	3	6
Lead and lead base alloys in semifabricated forms	38	15	37

World Production of Copper

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States (a)	Canada (b)	Mexico (crude) (c)	Chile (d)	Peru (d)	Fed. Rep. of Germany (e)	Norway (f)	United Kingdom (g-h)	Yugoslavia (e)	India (f-h)	Japan (e)	Turkey (f)	Australia (e)	Northern Rhodesia (e)	Union of South Africa (d)
1955															
Total	1,036,702	326,599	61,583	447,288	35,478	286,805	14,876	138,271	31,151	8,432	124,908	26,313	41,935	350,302	47,176
1956															
Total	1,133,134	356,251	69,918	506,251	35,005	279,461	16,457	127,365	32,390	8,827	139,062	27,101	55,711	435,186	47,914
1957															
Total	1,115,483	360,745	42,905	....	46,141	255,710	17,265	121,799	37,186	9,298	143,654	27,101	55,633	499,418	47,828
1958															
Total	1,881,170	346,816	68,386	462,064	42,750	295,312	19,529	106,134	37,116	9,062	136,612	24,676	72,361	426,513	53,090
1959															
May	104,236	32,622	5,275	46,083	3,770	25 358	1,771	7,693	3,503	764	18,516	2,480	6,408	53,067	4,676
June	99,419	36,979	5,847	46,901	3,357	24,635	1,743	10,909	5,231	776	18,621	2,362	8,133	53,895	4,766
July	81,662	36,067	5,755	45,508	3,676	25,890	1,639	7,108	3,369	781	18,957	1,846	5,346	48,806	4,541
Aug.	51,327	35,045	5,326	50,093	2,533	24,716	1,677	6,610	1,810	774	18,805	2,378	5,798	50,285	4,357
Sept.	19,503	35,740	4,125	44,439	8,782	25,357	1,986	10,438	3,619	799	18,837	2,427	7,111	48,753	3,742
Oct.	20,931	35,980	4,068	36,449	3,061	27,840	1,800	8,951	3,137	804	18,898	2,304	....	49,519	3,025
Nov.	18,351	35,271	4,886	50,877	2,904	25,258	1,495	10,076	3,451	802	17,186	2,923	....	49,232	5,005
Dec.	26,686	34,416	4,872	53,186	3,438	28,143	2,035	8,736	2,403	421	20,498	....	....	48,350	5,244
1960															
Jan.	64,098	36,404	4,326	47,550	2,901	27,222	1,941	7,489	3,310	769	21,096	....	4,702	56,495	5,061
Feb.	85,899	35,824	4,817	43,380	3,579	25,288	1,954	8,719	3,013	831	....	....	6,915	47,322	3,617
Mar.	107,895	38,341	5,376	49,124	15,956	30,836	2,008	8,453	3,617	913	22,968	2,723	6,310	52,332	4,292
Apr.	104,895	34,289	4,672	50,010	16,501	26,915	1,905	9,640	3,177	808	21,563	2,480	....	54,595	4,738
May	104,272	36,892	4,300	39,580	16,198	29,897	2,038	12,379	3,375	838	18,077	....	....	55,596	4,706
June	95,522	37,016	5,061	43,826	13,259	28,011	1,877	11,720	2,982	820	23,314	1,550	7,149	54,616	4,494
July	91,238	34,425	4,515	50,251	14,544	27,869	1,822	7,844	3,935	878	23,498	....	....	54,982	4,327
Aug.	84,579	36,789	4,737	49,342	12,544	29,921	....	10,165	....	856	23,385	....	....	56,053	....
Sept.	97,467	35,942	4,373	....	18,453	....	....	....	....	....	....	....	....	50,937	....

(a) Reported by Copper Institute. Crude, "recoverable contents of mine production or smelter production or shipments, and custom intake." Does not include intake of scrap nor of imported ore except that received from Cuba and Philippines. (b) Blister copper plus recoverable copper in concentrates, matte, etc., exported. (c) Crude copper, i. e., copper content of blister or converter copper as originally produced in the several countries, although some of it may be refined at home; e. g., in Rhodesia. (d) Blister and/or refined. (e) Refined. There are quantities of scrap included in the electrolytic production in addition to that reported, tonnage of which is not obtainable. (f) Smelter production. (g) Refinery production from imported blister only. (h) British Bureau of Non-Ferrous Metal Statistics. * Refined.

World Production of Refined Lead

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States	Canada	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Italy	Spain	Yugoslavia	Japan	Australia (a)	French Morocco	Tunisia	Rhodesia	Total
1955																
Total	547,153	148,811	221,138	67,303	91,241	73,251	162,508	46,806	67,509	83,347	40,912	254,558	28,870	28,620	17,976	1,893,125
1956																
Total	613,293	147,865	213,524	61,917	111,479	73,251	178,713	42,780	64,824	83,507	51,019	256,300	30,993	26,623	17,024	1,984,344
1957																
Total	604,533	142,935	218,266	55,971	....	94,509	195,136	42,336	61,332	85,313	59,670	261,035	34,442	27,069	12,364	2,041,530
1958																
Total	575,612	130,886	246,443	80,999	119,192	111,337	223,973	60,860	77,490	92,903	52,915	271,654	42,266	32,359	16,492	1,955,753
1959																
May	39,101	13,357	16,934	6,606	8,797	7,363	17,728	3,614	7,435	8,369	6,137	23,499	2,050	1,784	1,344	165,602
June	37,459	12,997	20,000	6,540	9,125	6,976	18,128	2,453	6,510	7,854	6,349	25,151	1,552	926	1,344	164,815
July	32,882	8,096	17,099	6,401	8,734	6,065	16,381	4,384	6,074	2,221	5,303	19,125	2,859	1,749	1,344	139,291
Aug.	25,589	7,357	19,086	4,267	7 547	6,581	15,256	3,354	6,049	8,645	5,344	21,168	862	2,863	1,344	136,725
Sept.	14,801	9,775	14,320	4,354	7,217	6,164	17,773	4,502	4,728	8,731	5,322	22,786	3,567	2,352	1,344	128,850
Oct.	18,892	9,897	17,988	6,093	7,107	6,004	18,070	4,310	6,193	....	4,663	24,226	3,466	2,669	1,344	.....
Nov.	18,796	9,674	18,223	6,199	7,766	6,431	17,820	4,310	6,193	8,273	4,594	24 226	3,466	2,669	1,344	141,370
Dec.	30,160	10,071	16,448	5,826	7,708	6,581	19,726	4,638	6,639	11,393	6,865	23,448	3,869	2,056	1,344	.....
1960																
Jan.	40,043	11,664	15,821	6,127	8,450	6,818	19,424	3,128	7,284	6,896	6,699	26,233	2,448	....	1,309	163,457
Feb.	36,435	12,459	17,371	6,063	8,746	6,276	17,907	4,260	6,468	7,167	....	24,964	2,267	1,047	1,316	.....
Mar.	37,192	13,967	13,687	7,154	9,561	8,500	19,743	3,716	6,249	7,804	7,034	19,307	2,916	1,774	1,348	161,625
Apr.	40,177	13,261	17,715	6,945	9,357	9,716	19,202	3,607	6,886	6,382	6,607	19,663	3,053	2,663	1,347	168,049
May	36,509	13,467	18,736	6,905	9,406	9,370	20,299	4,074	....	6,865	6,086	22,065	3,103	1,241	1,354	.....
June	33,448	13,017	14,320	6,695	8,247	8,343	16,372	3,387	4,870	8,503	6,763	19,649	2,423	1,813	1,355	150,774
July	29,270	....	15,523	7,000	6,897	8,818	17,036	4,029	4,624	9,125	7,177	....	3,835	2,922	1,409	.....
Aug	32,623	....	16,639	6,008	5,915	2,205	18,794	3,425	....	....	6,666	....	1,463	837	1,344	.....
Sept.	29,638	....	14,722	6,384	....	8,818	....	....	....	....	....	....	2,148	2,215	1,393	.....

(a) Production credited to Australia includes lead refined in England from Australian base bullion.

World Production of Slab Zinc

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States (a)	Can. (b)	Mexico	Peru (b-c)	Belgium	France (a)	Fed. Rep. of Germany	Great Britain	Italy	Netherlands	Norway (b)	Spain	Yugoslavia	Japan (a)	Australia (b)	Rhodesia (b)	Total (d)
1955																	
Total	1,031,018	257,008	61,879	18,943	233,623	123,623	197,024	90,917	77,761	31,202	49,724	26,244	15,175	122,965	113,221	31,248	2,534,457
1956																	
Total	1,062,954	255,601	62,136	10,428	251,906	124,105	204,961	90,784	80,407	32,123	53,170	25,224	15,434	153,821	117,445	32,396	2,630,383
1957																	
Total	1,574,500	247,356	62,354	35,772	259,701	148,455	202,627	85,348	81,179	32,786	52,787	24,279	30,256	152,145	123,587	33,040	2,691,699
1958																	
Total	892,607	254,661	18,354	34,685	257,540	177,422	210,408	80,494	5,955	2,841	54,423	26,750	34,446	166,883	128,548	39,508	2,464,639
1959																	
Apr.	76,393	21,512	5,225	2,502	20,408	14,087	16,426	6,030	7,039	2,816	3,621	2,239	2,509	15,645	10,472	2,716	216,378
May	77,489	21 147	5,108	2.545	21,181	13,902	16,633	6,595	7,790	2,823	4,798	2,273	2,701	16,171	11,137	2,744	226,057
June	75,514	21 250	4,776	2 524	21,004	14,120	16,185	8,271	7,164	2,899	4,759	2,180	2,083	15,873	10,899	2,716	218,131
July	73,101	21,055	5,038	2,634	20,100	14,262	16,325	6,112	7,303	2,917	4,539	2,057	3,796	15,233	11,189	2,856	215,525
Aug.	69,768	21 588	4,965	2,504	19,472	14,138	16,585	6,507	7,370	2,968	4,646	2,198	3,355	15,308	11,298	2,912	211,964
Sept.	62,202	20,744	4,935	2,527	19,387	11,883	16,366	7,892	6,819	2,928	4,708	2,208	3,013	15,133	10,985	2,800	199,560
Oct.	63,938	21,744	5,084	2,545	20,512	13,228	17,064	5,657	6,403	2,967	3,570	2,245	....	....	10,904	2,800	.....
Nov.	62,346	21,039	5,072	2,608	21,180	12,251	16,689	6,203	6,403	2,967	3,570	2,245	4,990	13,634	10,904	2,800	199,319
Dec.	69,666	21,963	5,330	2,578	21,810	12,807	17,336	7,772	6,519	3,201	3,074	2,331	....	15,141	11,305	2,906	.....
1960																	
Jan.	73,326	22,426	5,278	2,608	21,957	12,675	17,409	7,250	6,781	2,786	4,743	2,402	3,178	15,498	11,023	2,707	220,587
Feb.	74,738	21,055	4,627	2,660	22,059	13,331	16,501	5,761	6,774	2,957	4,299	2,213	3,180	....	10,357	2,664	.....
Mar.	86,028	22,549	5,297	2,841	22,406	14,424	17,663	7,868	7,794	3,462	4,388	2,242	3,392	16,307	11,137	2,894	.....
Apr.	83,221	21,391	4,662	2,760	22,608	14,235	16,883	6,860	7,173	3,112	4,421	2,146	3,100	16,188	10,874	2,800	.....
May	79,216	21,701	4,972	3,051	23,278	14,071	17,147	5,137	8,038	3,361	3,638	....	3,190	12,088	11,238	2,897	.....
June	76,723	21,294	4,554	2,951	23,024	13,837	15,984	6,786	7,507	3,454	3,988	2,174	3,211	16,654	10,288	2,803	.....
July	73,754	20,860	5,080	3,068	23,094	14,148	16,892	6,574	7,629	3,390	2,390	2,264	3,250	17,355	11,760	2,803	.....
Aug.	63,840	21,203	4,983	3,140	22,845	13,427	16,679	5,569	7,777	3,319	3,815	....	....	17,417	....	2,821	.....
Sept.	60,004	21,633	4,662	2,897	....	11,501	....	7,187	....	....	4,502	....	....	....	....	2,745	.....

(a) Partially electrolytic. (b) Entirely electrolytic. (c) Beginning 1954 both electrolytic and electrochemic. (d) The above totals omit production in Russia, Czechoslovakia, Poland and in Argentina.

U. K. Stocks of Zinc

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

At start of:	Virgin Zinc 1959	Virgin Zinc 1960	Zinc Conc. 1959	Zinc Conc. 1960
Jan.	34,166	37,162	56,371	45,885
Feb.	34,805	48,337	58,518	41,547
Mar.	36,850	48,689	57,897	39,546
Apr.	38,457	51,064	52,151	44,250
May	38,643	54,491	47,936	47,486
June	37,713	52,470	41,954	47,595
July	38,297	52,004	45,640	54,044
Aug.	37,427	55,362	43,948	58,587
Sept.	40,358	53,583	42,385	63,312
Oct.	40,995	52,717	39,233	63,092
Nov.	35,994	....	38,948	....
Dec.	35,460	....	47,131	....

U. K. Zinc Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 tons)

	1960 July	1960 Aug.	1960 Sept.
(Gross Weight)			
Zinc ore and concentrates:	27,348	13,528	14,364
Zinc conc.*	11,479	10,546	7,434
Australia	10,470	8,721	3,211
Canada	26	...	...
Peru	590	588	597
Burma	357	1,127	1,324
Other countries	36	110	2,302
(Gross Weight)			
Zinc and zinc alloys:	12,642	11,410	14,036
Australia	1,149	...	...
Canada	7,757	6,566	5,948
Belgium	1,234	1,208	1,446
Germany (W.)	3	...	1
Netherlands	...	96	100
Soviet Union	25	280	705
United States	1,074	711	3,437
Belgian Congo	...	1,450	1,450
Poland	100	100	100
Other countries	1,300	999	849

* British Bureau of Non-Ferrous Metal Statistics. The estimated zinc content is not the content of the gross weight as officially reported for any comparable period.
† Not available.

U. K. Copper Exports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 tons)

	1960 July	1960 Aug.	1960 Sept.
Copper unwrought —ingots, blocks, slabs, bars, etc.	3,242	4,424	4,611
Wire (including uninsulated electric wire)	142	154	194
Tubes	705	934	827
Other copper, worked including pipe fittings)	73	54	126
Total	9,343	6,815	7,886

Copper Consumption in United Kingdom

British Bureau of Non-Ferrous Metal Statistics

(In tons of 2,240 pounds)

	Unalloyed	Alloyed*	Total	Virgin	Scrap
1956 Total	388,167	251,312	639,479	500,794	138,685
1957 Total	407,326	234,158	641,484	507,493	133,991
1958 Total	442,977	225,007	667,978	534,619	133,359
1959					
June	35,009	21,103	56,112	44,761	11,351
July	24,714	19,858	44,572	32,034	12,538
August	24,524	16,097	40,621	30,866	9,735
September	35,447	21,920	57,367	45,178	12,189
October	37,221	23,880	61,101	47,345	13,756
November	37,463	23,392	60,855	47,031	13,824
December	36,044	23,202	59,246	44,753	14,493
Total	382,295	250,871	633,166	478,819	154,347
1960					
January	33,888	23,428	57,316	41,741	15,575
February	37,662	23,925	61,587	48,824	12,763
March	41,306	26,676	67,982	54,389	13,593
April	35,153	23,525	58,678	41,147	17,531
May	38,621	25,038	63,659	46,406	17,253
June	40,612	24,786	65,398	54,830	10,568
July	26,294	20,012	46,306	33,294	13,012
August	28,775	20,325	49,100	38,055	11,045
September	39,977	25,771	65,748	48,621	17,127

* Includes copper sulphate effective October, 1954.

U. K. Virgin Copper Stocks

(In long tons)

(British Bureau of Non-Ferrous Metal Statistics)

At start of.	1958	1959	1960
Jan.	91,477	64,184	55,005
Feb.	82,483	65,941	61,008
Mar.	89,147	65,875	55,979
Apr.	94,330	72,946	51,137
May	88,582	72,318	59,404
June	88,913	78,505	77,808
July	81,851	80,477	71,391
Aug.	84,756	81,986	98,083
Sept.	89,899	89,483	110,594
Oct.	85,092	77,803	110,300
Nov.	74,696	64,602	....
Dec.	69,023	60,936	....

U. K. Refined Lead Stocks

(British Bureau of Non-Ferrous Metal Statistics)

(In long tons)

At start of.	1958	1959	1960
Jan.	51,296	45,444	48,035
Feb.	49,134	48,102	44,290
Mar.	47,738	40,535	42,043
Apr.	40,547	53,289	41,248
May	37,509	62,286	50,363
June	34,608	63,135	45,657
July	40,518	57,810	46,542
Aug.	37,148	67,586	53,069
Sept.	43,758	66,048	59,595
Oct.	48,856	63,121	58,157
Nov.	40,216	56,697	....
Dec.	35,335	46,984	....

Zinc Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

	1960 June	1960 July	1960 Aug.
IMPORTS			
U. S. (s.t.)	15,475	3,692	8,134
Canada (s.t.)	3	...	...
Belgium	445	...	...
Denmark	1,530	849	939
France	2,347	1,979	1,412
Germany, W.*	15,377	11,659	...
Italy	795	...	...
Netherlands	609	1,541	996
Sweden	2,130	1,274	...
Switzerland*	2,915	2,385	1,029
U. K. (l.t.)	15,850	12,642	11,410
India† (l.t.)	4,972	...	...
EXPORTS			
U. S. (s.t.)	4,236	2,386	7,601
Canada (s.t.)	22,409	11,433	15,730
Belgium	12,815	...	...
Denmark	409	300	184
France	465	546	532
Germany, W.*	1,887	2,601	...
Italy	1,290	...	...
Netherlands	1,530	1,640	1,673
Norway	2,504	...	...
Switzerland*	4	10	22
U. K.‡ (l.t.)	1,435	726	577
Northern Rhodesia† (l.t.)	3,199	2,448	2,516
Australia (l.t.)	1,045	...	...

* Includes scrap.
† British Bureau of Non-Ferrous Metal Statistics.
‡ Includes manufactures.

United Kingdom Tin Statistics

(British Bureau of Non-Ferrous Metal Statistics)

	Tin Content of Tin in Ore: Imports	Production*	Stock at end of period*	Tin Metal: Imports	Production*	Consumption	Exports & Re-exports	Stock at end of period
1957 Total	39,272	1,028	....	9,834	34,175	20,365	7,362	71,931
1958 Total	27,419	1,090	....	13,195	32,551	20,413	20,398	19,054
1959								
September	2,990	115	2 132	33	2,229	2,093	3,742	10,624
October	2,259	108	1,851	24	3.101	1,915	1,986	10,383
November	3,936	90	3,317	25	2,513	1,861	1,997	10,545
December	2,161	117	2,941	15	2.858	1,997	1,513	11,523
Total	**25,812**	**1,252**	....	**726**	**27,229**	**21,396**	**21,858**	**10,884**
1960								
January	**1,490**	**117**	**1,845**	**190**	**2,377**	**1,878**	**1,894**	**10,884**
February	2,417	105	2,095	421	2,144	1,879	1,189	10,240
March	2,294	98	2,316	10	2,743	2,191	1,099	10,677
April	1,532	90	2,216	159	1,645	1,774	231	10,349
May	1,785	21	1,496	661	2,429	1,902	723	10,565
June	2,255	21	1,345	25	2,828	2,133	515	11,113
July	1,840	18	1,202	476	1,894	1,638	241	11,797
August	2,419	18	1,345	331	1,907	1,696	693	11,771

*As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on toll. Stocks exclude strategic stock but include official warehouse stocks.

Canada's Copper Output

(Dominion Bureau of Statistics)

(Primary Copper)

(In Tons)

	1957	1958	1959	1960
Jan.	25,469	32,868	24,664	36,404
Feb.	21,861	28,668	28,016	35,824
Mar.	27,663	29,239	32,427	38,341
Apr.	27,398	30,635	32,130	34,290
May	29,086	32,471	32,622	36,892
June	24,093	32,418	36,979	37,025
July	27,195	31,131	36,067	37,877
Aug.	26,943	30,867	35,045	37,290
Sept.	24,633	27,546	35,740	...
Oct.	30,312	22,572	35,980	...
Nov.	27,331	20,368	35,271	...
Dec.	31,604	19,033	34,416	...
Year	323,583	346,816	399,362	

Canada's Lead Exports

(Dominion Bureau of Statistics)

(In Pigs)

(In Tons)

	1957	1958	1959	1960
Jan.	8,946	4,752	5,034	5,549
Feb.	6,633	1,553	6,377	6,692
Mar.	7,044	9,497	11,831	11,216
Apr.	7,314	7,450	7,836	5,407
May	9,676	7,764	12,230	6,979
June	7,210	4,036	15,610	9,521
July	4,682	12,629	3,478	7,955
Aug.	6,416	7,232	4,023	9,080
Sept.	8,467	5,125	3,895	....
Oct.	7,761	10,320	4,885	....
Nov.	6,175	10,641	6,785	....
Dec.	4,217	11,352	10,218	....
Year	84,541	92,351	92,252	....

Canada's Silver Exports

(Dominion Bureau of Statistics)

(In ores and concentrates)

Fine Ounces)

	1958	1959	1960
Jan.	634,715	185,367	887,242
Feb.	208,149	329,742	1,312,006
Mar.	350,827	425,973	740,465
Apr.	284,971	989,593	809,500
May	376,082	564,017	491,805
June	438,253	871,570	545,610
July	529,770	728,598	752,373
Aug.	279,511	688,042	911,124
Sept.	583,570	763,017	.....
Oct.	323,475	767,939	.....
Nov.	217,892	70,205	.....
Dec.	871,573	430,802	.....
Year	5,098,788	6,210,175	.....

Canada's Copper Exports

(Dominion Bureau of Statistics)

(Ingots, bars, slabs and billets)

(In Tons)

	1957	1958	1959	1960
Jan.	20,582	26,883	10,620	29,046
Feb.	16,272	16,816	10,304	22,295
Mar.	14,270	18,662	11,025	20,338
Apr.	16,417	23,261	17,079	21,135
May	19,048	19,358	21,739	20,767
June	10,826	20,831	21,310	24,832
July	18,621	21,703	13,650	22,242
Aug.	21,980	15,881	15,155	30,357
Sept.	14,314	15,373	21,077	....
Oct.	13,110	20,341	19,977	....
Nov.	16,622	14,391	23,172	....
Dec.	16,282	11,138	20,542	....
Year	198,794	224,638	198,010	....

Canada's Zinc Output

(Dominion Bureau of Statistics)

(Refined Zinc)

(In Tons)

	1957	1958	1959	1960
Jan.	20,340	21,801	21,456	22,247
Feb.	19,808	19,743	19,709	21,055
Mar.	21,941	22,314	22,135	22,549
Apr.	20,504	20,986	21,512	21,391
May	20,564	21,269	21,147	21,701
June	19,928	20,353	21,250	21,294
July	20,061	20,873	21,055	20,860
Aug.	20,305	21,152	21,588	21,203
Sept.	20,247	20,530	20,744	....
Oct.	20,892	21,125	21,744	....
Nov.	20,933	20,273	21,039	....
Dec.	21,823	21,705	21,963	....
Year	247,351	252,157	255,342	....

Canada's Silver Output

(Dominion Bureau of Statistics)

(In Ounces)

	1958	1959	1960
Jan.	2,529,583	3,094,440	2,755,069
Feb.	2,294,655	2,264,903	2,864,074
Mar.	2,448,698	2,782,307	2,734,245
Apr.	2,558,958	2,691,503	2,582,463
May	2,650,665	2,499,149	2,348,469
June	2,527,632	2,676,937	2,965,690
July	2,385,687	2,867,957	2,914,320
Aug.	2,884,154	2,519,033	2,643,555
Sept.	2,856,304	2,446,846	.....
Oct.	2,390,027	3,072,219	.....
Nov.	2,643,790	2,333,137	.....
Dec.	2,917,528	2,678,623	.....
Year	31,087,681	31,927,054	.....

Canada's Lead Output

(Dominion Bureau of Statistics)

(Recoverable Lead)*

(In Tons)

	1957	1958	1959	1960
Jan.	14,032	17,117	17,118	16,284
Feb.	15,170	14,908	15,923	16,397
Mar.	16,940	15,421	17,389	16,887
Apr.	14,275	15,644	16,237	16,266
May	14,591	15,131	16,813	16,558
June	16,431	15,645	14,968	17,534
July	14,377	14,076	15,111	18,039
Aug.	14,679	12,260	14,104	16,800
Sept.	15,869	15,401	12,420	....
Oct.	14,151	14,564	13,958	....
Nov.	15,879	16,680	13,024	....
Dec.	15,296	18,248	14,545	....
Year	171,690	185,095	181,610	....

* New base bullion from Canadian ores plus recoverable lead in ores or concentrates shipped for export.

Canada's Zinc Exports

(Dominion Bureau of Statistics)

(Ore in Tons)

	1957	1958	1959	1960
Jan.	19,304	17,349	13,565	18,445
Feb.	16,618	8,376	12,675	12,995
Mar.	14,923	19,636	14,617	14,055
Apr.	17,131	16,346	12,789	13,344
May	16,680	15,121	11,049	12,460
June	16,157	7,776	20,298	10,113
July	12,912	27,394	23,122	18,540
Aug.	20,520	15,906	18,464	23,076
Sept.	17,671	8,670	14,367	....
Oct.	16,735	22,810	12,518	....
Nov.	17,225	17,978	16,577	....
Dec.	16,131	18,344	11,043	....
Year	202,007	195,707	181,084	....

Canada's Nickel Output

(Dominion Bureau of Statistics)

(In Tons)

	1957	1958	1959	1960
Jan.	16,609	16,710	8,047	17,399
Feb.	15,027	15,896	12,616	16,435
Mar.	16,733	15,853	14,922	17,780
Apr.	15,347	15,163	15,493	17,524
May	16,225	15,231	16,622	17,207
June	15,447	14,603	16,599	18,382
July	15,878	12,851	16,199	17,821
Aug.	16,756	12,597	16,784	19,642
Sept.	15,604	11,786	16,205	...
Oct.	15,628	3,682	17,212	...
Nov.	14,587	3,178	16,904	...
Dec.	15,096	3,298	18,738	...
Year	188,962	140,842	186,341	

Canadian Copper Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1960		
	July	Aug.	Sept.
Ore, matte, regulus, etc. (content)	2,689	3,778	9,014
United States	5,169	9,290	7,617
Belgium	...	158	...
Germany (W.)	...	158	...
Norway	1,209	2,441	1,186
U. Kingdom	102	242	153
Japan	...	...	6,718
Ingots, bars, billets, anodes	22,242	30,356	19,253
United States	5,169	8,290	7,617
Belgium	...	667	780
France	841	1,966	331
Finland	280	...	112
Germany (W.)	1,316	3,696	392
Italy	504	112	112
Netherlands	28	1,456	896
Portugal	224	...	56
Sweden	450	224	...
Switzerland	...	...	56
U. Kingdom	11,767	10,441	5,852
Yugoslavia	...	280	...
Australia	...	224	560
India	1,663	1,831	1,109
Japan	...	168	1,380
Other countries	...	1	...
Total Exports:			
Crude & refined	24,931	34,134	28,267
Old and scrap	1,555	1,496	832
Rods, strips, sheet & tubing	2,089	1,222	1,987

Canadian Zinc Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1960		
	July	Aug.	Sept.
Ore (Zinc content)	18,540	23,076	10,121
United States	9,762	17,021	10,121
Belgium	76	3,047	...
France	...	3,008	...
Norway	4,349	...	...
United Kingdom	4,353	...	...
Slab Zinc	11,433	15,730	14,310
United States	2,356	5,882	10,932
Brazil	580	...	...
Belgium	...	224	...
Germany (W.)	336	336	...
Netherlands	...	224	...
United Kingdom	6,693	6,454	2,470
Korea	219	11	...
Hong Kong	...	248	...
Philippines	355	1,433	...
India	524	593	80
Japan	15	...	772
Thailand	355	385	...
Other countries	...	...	56
Totals Exports:			
Ore and slabs	29,973	38,806	24,431
Zinc scrap, dross, ashes	432	570	297
United States	47	112	109
Belgium	243	137	...
Germany (W.)	...	66	...
Netherlands	76	...	...
United Kingdom	...	188	173
Japan	66	67	15

Canadian Lead Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1960		
	July	Aug.	Sept.
Ore (lead content)	3,505	9,979	1,485
United States	2,677	2,075	1,485
Belgium	828	3,950	...
Germany (W.)	...	3,954	...
Refined lead	7,955	9,080	1,801
United States	3,961	3,295	20
United Kingdom	3,217	3,609	896
Japan	642	1,823	787
Taiwan	22	187	...
Thailand	...	132	46
India	91	...	...
Other countries	22	34	52
Total Exports:			
Ore and refined	11,460	19,059	3,286
Lead scrap	1,015	704	82

Copper Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in ingots, slabs, etc.; metric tons except where otherwise noted.

	1960		
	June	July	Aug.
IMPORTS			
U. S. (blist., s.t.)	36,670	19,129	41,712
(ore, etc., s.t.)	8,080	8,330	4,036
(ref., s.t.)	7,464	6,818	8,975
Belgium*	17,951	...	...
Denmark	420	21	408
France (crude)	813	...	1,649
(refined)	14,758	16,976	21,582
Italy	15,374	...	...
Germany, W.	42,202	41,175	...
Netherlands	2,660	3,138	2,812
Norway	470	...	...
Sweden	8,664	10,027	...
Switzerland	3,435	2,568	3,360
U. K. (l.t.)	45,676	56,443	50,182
India (blister/-ref., l.t.)†	3,284	...	...
Australia (blister & ref., l.t.)	200	...	...
EXPORTS			
U. S. (ore and unref., s.t.)	1,308	47	255
(ref., s.t.)	38,757	45,020	58,720
Canada (ref., s.t.)	24,831	22,242	30,356
Belgium*	15,341	...	...
Germany, W.	6,499	7,910	...
Norway	1,081	...	...
Sweden	288	2,809	...
U. K. (l.t.)	4,633	3,242	4,424
Turkey*	1,820	...	...
N. Rhodesia (blister & ref., l.t.†	49,204	47,801	43.84.

* Includes alloys.

† British Bureau of Non-Ferrous Metal Statistics.

Canada's Nickel Exports

(Dominion Bureau of Statistics)

(Refined, in oxide, matte, etc.)

(In Tons)

	1957	1958	1959	1960
Jan.	14,260	14,233	6,757	21,443
Feb.	9,974	12,157	7,976	14,680
Mar.	14,958	12,316	14,006	19,072
Apr.	18,671	20,962	14,213	13,892
May	19,351	20,574	16,142	14,351
June	14,539	16,144	15,901	15,719
July	14,181	14,055	11,985	13,192
Aug.	14,966	13,012	13,664	21,495
Sept.	14,160	14,371	19,143	.....
Oct.	13,370	8,335	.....	.....
Nov.	16,620	3,001	.....	.....
Dec.	14,606	5,060	.....	.....
Year	178,656	154,220	.....	.....

French Zinc Imports

(A. B. M. S.)

(In metric tons)

	1960		
	July	Aug.	Sept.
Ore (gross weight)	25,160	26,385	20,810
Canada	5,000	...	...
Peru	...	3,008	...
Belgium	1,603	1,954	1,862
Finland	...	2,000	...
Greece	...	1,232	1,990
Italy	...	7,651	...
Norway	...	1,568	1,402
Spain	4,414	675	3,015
Algeria	4,991	4,147	7,707
Morocco	6,632	4,150	4,834
Belgian Congo	2,520	...	...
Slabs, bars, blocks, etc.	1,979	1,412	938
Belgium	1,195	860	785
Germany (W.)	...	20	20
Italy	51	...	...
Netherlands	...	532	...
Norway	...	...	33
Russia	633	...	...
Spain	100	...	100

French Copper Imports

(A. B. M. S.)

(In metric tons)

	1960		
	July	Aug.	Sept.
Crude copper for refining (blister, black and cement)	...	1,649	...
Belgian Congo	...	1,090	...
Rhodesia & Nyasaland	...	559	...
Refined	16,976	21,582	20,952
United States	6,181	4,933	9,794
Canada	1,131	1,531	1,479
Chile	250	3,254	983
Belgium	5,875	7,286	4,397
Germany (W.)	334	252	133
Norway	76	...	...
Sweden	4	85	3
U. Kingdom	...	...	21
Belgian Congo	1,065	1,962	2,621
Rhodesia-Nyasaland	2,060	2,152	1,503
Other countries	...	127	18

U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 tons)

	1960		
	July	Aug.	Sept.
(Gross Weight)			
Copper and copper alloys:	56,443	50,182	46,024
U. of S. Africa	300	360	61
Rhodesia-Nyasaland	23,275	22,550	18,657
Canada	9,740	10,415	8,048
Belgium	2	251	301
Germany (W.)	1,077	86	155
Norway	201	201	201
United States	9,630	8,562	6,601
Chile	11,540	7,399	11,575
Peru	170	125	100
Belgian Congo	250	———	———
Other countries	258	233	325
Of which:			
Electrolytic	37,704	38,892	31,162
Other refined	6,253	2,782	4,583
Blister or wrought	11,690	8,155	9,773
Wrought and alloys	796	353	506
Total	56,443	50,182	46,024

Nonferrous Castings

MONTHLY SHIPMENTS, BY TYPE OF METAL
(Bureau of Census — Thousands of Pounds)

	Aluminum	Copper	Magnesium	Zinc	Lead Die
1954 Total	607,764	834,557	25,572	474,741	18,396
1955 Total	833,058	1,011,748	27,892	781,254	21,045
1956 Total	801,136	966,473	36,168	88,069	20,734
1957 Total	751,856	875,389	30,322	663,330	23,791
1958 Total	596,816	739,915	27,228	508,297	18,920
1959					
April	72,976	82,799	2,455	57,325	1,862
May	68,268	78,413	2,370	60,656	2,025
June	66,471	79,730	2,484	56,128	2,007
July	56,911	67,073	2,265	46,756	1,858
August	55,904	68,979	2,243	46,566	1,898
September	66,193	76,045	2,263	58,144	2,218
October	67,499	79,832	2,436	59,214	2,063
November	54,557	70,674	2,023	46,270	1,755
December	64,939	73,558	2,163	60,652	1,346
Total	790,520	892,027	27,144	651,437	21,658
1960					
January	68,247	73,971	2,135	61,357	1,496
February	71,699	71,797	2,075	62,925	1,628
March	72,216	75,908	1,903	60,816	1,994
April	61,797	66,777	1,926	47,553	2,030
May	60,330	66,299	1,953	50,844	1,935
June	60,068	64,585	2,050	50,809	2,009
July	45,694	48,399	1,638	35,117	1,488
August	58,647	63,765	2,025	45,056	1,689

Copper Castings Shipments

BY TYPE OF CASTING
(Bureau of Census) (Thousands of Pounds)

	Total	Sand	Permanent Mold	Die	All Other
1952 Total	1,009,910	910,862	63,865	8,259	26,924
1953 Total	990,496	888,369	61,316	10,077	30,734
1954 Total	834,557	751,804	48,849	6,480	27,394
1955 Total	1,011,748	907,852	63,041	8,541	31,408
1956 Total	966,113	866,404	57,522	10,023	32,134
1957 Total	875,389	789,819	44,746	10,776	30,048
1958					
Total	739,985	667,255	36,529	10,201	22,681
1959					
February	66,589	62,593	3,557	1,176	2,263
March	78,641	69,472	4,333	1,361	3,475
April	82,799	73,567	4,640	1,328	3,264
May	78,413	69,351	4,363	1,291	3,408
June	79,730	70,836	4,421	1,175	3,298
July	69,073	61,650	3,869	946	2,608
August	68,979	60,346	4,410	993	3,230
September	76,045	66,517	4,810	1,138	3,580
October	79,832	69,583	5,172	1,169	3,908
November	70,674	61,490	4,893	1,160	3,131
December	73,558	64,579	4,337	1,130	3,512
Total	891,216	790,290	52,377	14,083	36,907
1960					
January	73,971	65,742	3,915	1,371	2,943
February	71,797	63,105	4,146	1,282	3,266
March	75,908	66,517	4,346	1,381	3,664
April	66,777	58,453	4,523	1,162	2,639
May	66,299	57,848	4,463	1,153	2,835
June	64,485	56,441	3,715	1,180	3,249
July	48,399	42,778	2,910	929	1,854
August	63,765	56,344	3,669	1,399	2,353

Nickel Averages

Electro, cathode sheets, 99.00%, f.o.b. refinery, duty included
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	74.00	74.00	74.00	74.00
Feb.	74.00	74.00	74.00	74.00
Mar.	74.00	74.00	74.00	74.00
Apr.	74.00	74.00	74.00	74.00
May	74.00	74.00	74.00	74.00
June	74.00	74.00	74.00	74.00
July	74.00	74.00	74.00	74.00
Aug.	74.00	74.00	74.00	74.00
Sept.	74.00	74.00	74.00	74.00
Oct.	74.00	74.00	74.00	74.00
Nov.	74.00	74.00	74.00	...
Dec.	74.00	74.00	74.00	...
Aver.	**74.00**	**74.00**	**74.00**	...

Platinum Averages

N. Y. MONTHLY QUOTATIONS
(Dollars per Troy Ounce)

	1957	1958	1959	1960
Jan.	101.92	77.85	52.57	80.00
Feb.	98.59	74.82	59.25	83.29
Mar.	93.50	72.096	77.10	83.00
Apr.	93.45	70.72	77.18	83.00
May	92.865	67.34	77.50	83.00
June	92.02	66.18	77.50	83.00
July	90.265	64.35	78.00	83.00
Aug.	84.426	60.94	78.00	83.00
Sept.	84.00	59.50	78.00	83.00
Oct.	84.00	57.327	78.00	83.00
Nov.	83.80	56.41	78.44	...
Dec.	78.70	53.154	78.50	...
Aver.	**89.79**	**65.07**	**74.17**	...

Spot Straits Tin

(Straits, Open Market, N. Y.)
Monthly Average Prices

	1957	1958	1959	1960
Jan.	101.511	92.94	99.411	99.863
Feb.	101.132	93.915	102.785	101.178
Mar.	99.643	94.452	103.042	100.228
Apr.	99.304	93.988	102.505	99.25
May	93.347	94.512	103.125	99.554
June	98.05	94.708	104.25	101.377
July	96.52	94.898	102.337	103.588
Aug.	94.261	94.988	102.333	102.864
Sept.	93.406	94.101	102.44	102.381
Oct.	91.838	96.523	102.238	103.469
Nov.	89.236	99.118	101.021	...
Dec.	92.35	98.989	99.176	...
Aver.	**96.301**	**95.177**	**102.055**	..

Prompt Tin Prices

(Straits, Open Market, N. Y.)
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	101.347	92.653	99.351	99.863
Feb.	100.257	93.763	102.708	100.987
Mar.	99.476	94.363	103.042	100.098
Apr.	99.288	92.988	102.505	99.25
May	98.335	94.512	103.107	99.548
June	98.025	94.619	104.142	101.318
July	96.44	94.892	102.337	103.525
Aug.	94.159	94.976	102.345	102.853
Sept.	93.313	94.054	102.435	102.256
Oct.	91.848	96.455	102.238	103.319
Nov.	89.236	98.985	100.972	...
Dec.	92.34	98.96	99.176	...
Aver.	**93.672**	**95.069**	**102.03**	...

Quicksilver Averages

N. Y. Monthly Averages
Virgin, Dollars per 76-lb Flask

	1957	1958	1959	1960
Jan.	256.00	224.35	219.50	211.30
Feb.	256.00	229.39	219.50	212.68
Mar.	256.00	232.096	223.57	214.00
Apr.	256.00	233.06	239.52	214.00
May	256.00	229.48	245.86	214.00
June	256.00	229.00	241.64	212.00
July	256.00	230.25	236.74	210.00
Aug.	252.20	240.27	232.524	209.74
Sept.	248.58	241.12	225.429	209.00
Oct.	234.48	235.94	224.548	209.00
Nov.	228.33	230.05	217.944	...
Dec.	226.50	223.54	215.05	...
Aver.	**248.51**	**230.96**	**228.49**	..

Primary Aluminum Output, Shipments and Stocks

(U. S. Department of Interior)

	Stocks beginning of month short tons	Production short tons	Sold or Used — Short tons	Sold or Used — Value f. o. b. plant	Stocks end of month short tons
1958 Total	....	1,565,556	1,595,067	.....	.....
1959					
June	112,710	167,323	191,421	93,955,552	88,612
July	88,612	179,194	187,387	91,635,864	80,419
August	80,419	172,816	159,206	77,711,678	94,029
September	94,029	168,206	153,170	74,809,052	109,065
October	109,065	173,742	151,683	73,293,070	131,124
November	131,124	153,665	152,024	74,247,828	132,765
December	132,765	162,996	184,123	89,712,146	111,638
Total	....	1,953,017	1,987,465	.....	.....
1960					
January	111,638	164,023	148,129	$73,424,794	127,352
February	127,532	156,825	167,215	83,087,192	117,142
March	117,142	170,688	172,846	88,761,065	114,984
April	114,984	168,596	144,469	73,561,622	139,111
May	139,111	175,863	166,403	85,418,807	148,571
June	148,571	171,356	149,917	76,925,639	170,010
July	170,010	177,564	143,948	73,173,364	203,626
August	203,626	172,973	164,883	83,495,902	211,716

Aluminum Wrought Products

PRODUCERS' MONTHLY NET SHIPMENTS

(Bureau of Census — Thousands of Pounds)

	Total	Sheet, Plate, Foil, Rod & Bar	Wire & Cable	Extruded Shapes & Tubing	Powder & Paste
1955 Total	**2,805,500**	**1,542,368**	**365,391**	**812,311**	**35,854**
1956 Total	**2,870,101**	**1,577,601**	**398,602**	**782,398**	**28,017**
1957 Total	2,677,423	1,396,502	399,040	789,430	28,187
1958 Total	2,624,911	1,441,385	285,355	821,249	25,742
1959					
June	341,389	195,476	30,156	107,038	3,901
July	373,060	211,850	39,902	111,661	4,708
August	247,833	126,512	29,411	85,380	2,537
September	262,749	140,313	25,843	89,986	2,419
October	287,081	154,669	27,614	97,478	2,697
November	247,260	136,516	20,528	83,594	2,304
December	268,155	152,007	24,210	84,504	2,606
Total	3,397,705	1,894,159	321,824	1,075,373	34,843
1960					
January	250,116	141,060	22,475	78,674	3,370
February	256,017	147,026	22,626	79,268	2,435
March	267,149	152,580	24,682	82,584	2,180
April	247,382	139,762	24,026	76,838	2,227
May	268,228	156,542	25,218	84,202	2,266
June	274,173	157,006	29,114	84,664	3,389
July	247,590	149,221	24,813	70,786	2,770
August	253,111	141,138	27,065	77,596	3,081
September	262,036	146,984	28,293	79,685	3,612

Aluminum Castings Shipments

(Bureau of Census)

BY TYPE OF CASTING

(Thousands of Pounds)

	Total	Sand	Permanent Mold	Die	All Other
1954 Total	609,066	155,738	213,968	232,726	6,800
1955 Total	833,058	171,757	298,115	354,804	8,282
1956 Total	801,036	171,763	245,421	376,108	7,736
1957 Total	751,656	144,121	232,326	369,086	...
1958 Total	596,790	117,421	186,949	292,599	...
1959					
May	68,268	11,979	25,283	30,877	...
June	66,471	12,306	24,927	29,092	...
July	56,911	11,581	20,410	24,786	...
August	55,904	11,130	17,824	26,818	...
September	66,193	12,309	21,506	32,239	...
October	67,499	12,958	21,781	32,640	...
November	54,557	10,813	16,326	27,303	...
December	64,939	12,409	19,902	32,523	...
Total	772,212	142,131	262,179	346,589	...
1960					
January	68,247	11,278	22,368	34,514	...
February	71,699	11,800	23,614	36,177	...
March	72,216	12,934	22,413	36,749	...
April	61,797	12,339	19,950	29,400	...
May	60,068	11,280	20,953	27,722	...
June	45,669	8,735	15,804	20,978	...
July	45,694	8,765	15,804	20,973	...
August	58,647	10,639	18,850	29,106	...

Virgin Aluminum*

Unalloyed Ingot (50-lb.), 99½% min., f.o.b.

Monthly Average Prices

(Cents Per Pound)

	1957	1958	1959	1960
Jan.	27.10	28.10	26.80	28.10
Feb.	27.10	28.10	26.80	28.10
Mar.	27.10	28.10	26.80	28.10
Apr.	27.10	26.10	26.80	28.10
May	27.10	26.10	26.80	28.10
June	27.10	26.10	26.80	28.10
July	27.10	26.10	26.80	28.10
Aug.	28.70	26.77	26.80	26.00
Sept.	28.10	26.80	26.80	26.00
Oct.	28.10	26.80	26.80	26.00
Nov.	28.10	26.80	26.80	....
Dec.	28.10	26.80	27.361	....
Aver.	**27.517**	**26.889**	**26.847**	....

* Price of 28.10c prior to Aug. 1, 1960, based on primary 30-lb. ingot, 99½% plus.

Magnesium Wrought Products Shipments

(Bureau of Census)

(Thousands of Pounds)

	1957	1958	1959	1960
Jan.	2,130	1,271	1,271	1,535
Feb.	2,522	1,280	1,691	1,724
Mar.	2,388	1,398	1,717	1,966
Apr.	2,511	1,479	2,089	1,790
May	2,230	1,443	1,644	1,989
June	1,881	1,709	1,946	1,742
July	1,428	1,227	1,681	1,526
Aug.	1,540	1,823	1,823	1,853
Sept.	1,501	1,807	1,807	2,288
Oct.	1,453	1,983	2,220	....
Nov.	1,230	1,662	1,320	....
Dec.	1,102	1,622	1,675	....
Total	**21,915**	**18,702**	**20,884**	....

Cadmium Averages

(Cents Per Pound)

N. Y. Monthly Averages

Cents per lb. in ton lots

	1957	1958	1959	1960
Jan.	170.00	155.00	145.00	148.50
Feb.	170.00	155.00	145.00	150.00
Mar.	170.00	155.00	145.00	150.00
Apr.	170.00	155.00	120.00	150.00
May	170.00	155.00	120.00	150.00
June	170.00	155.00	120.00	150.00
July	170.00	155.00	120.00	150.00
Aug.	170.00	155.00	120.00	150.00
Sept.	170.00	152.60	120.00	151.43
Oct.	170.00	145.00	*140.00	160.00
Nov.	170.00	145.00	140.00	....
Dec.	166.40	145.00	140.00	....
Aver.	**169.70**	**152.30**	**132.00**	....

* As of Oct. 1, 1959, for lots of up to one ton.

Steel Ingot Production

(American Iron and Steel Institute)

Period	OPEN HEARTH Net tons	% of capacity	BESSEMER Net tons	% of capacity	ELECTRIC Net tons	% of capacity	TOTAL Net tons	% of capacity	Calculated weekly production, all companies (net tons)
1954 Total	80,327,494	73.6	2,548,104	53.2	5,436,054	52.0	88,311,652	71.0	1,693,741
1956 Total	102,840,585	91.6	3,227,997	67.4	9,147,567	81.2	115,216,149	89.8	2,203,828
1957 Total	101,657,776	87.0	2,475,138	54.9	8,582,082	71.3	112,714,996	84.5	2,161,776
1958									
Total	75,888,392	62.0	1,396,348	34.7	7,972,623	55.4	85,257,363	69.6	1,635,162
1959									
May	10,117,968	94.2	200,887	66.1	1,024,401	89.4	11,600,581	92.5	2,618,441
June	9,521,053	91.6	185,794	63.2	941,056	84.8	10,907,634	89.9	2,542,572
July	4,540,182	42.2	66,433	21.9	526,025	45.9	5,227,129	41.7	1,182,608
August	1,171,342	10.9	.....	...	267,935	23.4	1,439,277	11.5	324,893
September	1,299,396	12.0	.....	...	235,619	25.8	1,535,017	12.7	358,649
October	1,385,490	12.9	.....	...	319,043	27.8	1,704,533	13.6	384,770
November	6,290,659	60.5	92,361	31.4	754,793	68.0	7,267,607	52.9	1,694,081
December	10,468,534	92.4	205,666	67.7	1,033,668	90.2	11,989,319	95.6	2,712,516
Total	81,668,997	64.5	1,380,283	38.6	8,532,514	63.2	93,446,132	63.3	1,792,216
1960									
January	10,510,616	97.7	211,132	73.2	1,046,675	85.6	12,049,404	95.5	2,719,956
February	9,713,527	94.0	216,263	80.2	949,588	83.0	11,126,806	94.3	2,687,634
March	10,103,122	93.9	202,812	70.3	952,008	77.9	11,564,683	91.6	2,610,538
April	8,603,306	82.7	105,336	37.7	766,452	64.8	9,777,857	80.1	2,279,221
May	7,844,140	72.9	73,010	25.3	603,817	49.4	8,830,472	70.0	1,993,335
June	6,439,000	61.9	80,000	28.7	560,000	47.3	7,394,000	60.6	1,724,000
July	5,494,331	51.1	61,700	21.4	505,890	41.4	6,350,924	50.3	1,436,861
August	5,860,394	54.5	52,652	18.3	645,404	52.8	6,838,000	54.2	1,543,567
September	5,525,244	53.1	42,228	15.1	603,626	51.0	6,458,421	52.9	1,508,977
October	5,912,000	55.0	57,000	19.8	626,000	51.2	6,865,000	54.4	1,550,000

Blast Furnace Output

(American Iron and Steel Institute)

	net tons Pig Iron	Ferro-manganese & Spiegel	Total	% Capacity
1951				
Tot. Yr.	70,487,880	745,881	71,232,761	98.8
1952				
Tot. Yr.	61,528,665	629,926	62,158,591	84.1
1953				
Total	74,987,721	855,038	75,842,759	95.5
1954				
Total	58,119,382	568,735	58,688,117	71.6
1955				
Total	77,114,073	868,758	77,800,831	92.7
1956				
Total	75,301,134	664,341	75,965,475	88.9
1957				
Total	78,557,011	782,660	79,339,671	91.4
1958				
April	3,787,907	39,302	3,827,209	51.2
May	4,048,328	25,468	4,073,796	52.7
June	4,396,285	26,463	4,422,748	59.1
July	4,277,515	26,668	4,304,183	55.7
Aug.	4,799,955	31,374	4,831,329	62.1
Sept.	5,041,042	31,348	5,072,390	67.8
Oct.	5,835,995	36,963	5,872,958	76.6
Nov.	5,907,888	39,275	5,946,163	79.5
Dec.	6,025,385	47,505	6,072,890	78.6
Total	57,298,644	465,456	57,298,644	63.5
1959				
Jan.	6,260,395	48,572	6,211,823	77.9
Feb.	6,047,398	45,274	6,192,672	85.3
March	7,461,760	48,291	7,510,051	93.4
April	7,338,372	54,234	7,392,606	95.0
May	7,683,759	64,237	7,747,996	96.4
June	7,231,631	58,315	7,289,946	93.7
July	3,550,159	23,391	3,573,550	44.5
Aug.	.....	....	947,779	11.8
Sept.	.....	....	949,103	12.2
Oct.	.....	....	1,017,659	12.7
Nov.	4,199,101	20,172	4,219,273	54.2
Dec.	7,638,359	65,728	7,704,087	95.0
Total	60,322,426	452,313	60,774,738	...
1960				
Jan.	7,753,753	76,344	7,830,097	95.5
Feb.	7,342,469	71,533	7,414,002	...
March	7,713,696	79,715	7,793,411	95.1
April	6,770,229	69,864	6,830,093	86.1
May	6,030,992	63,419	6,394,411	78.0
June	5,261,171	48,316	5,309,487	66.9
July	4,480,144	43,353	4,523,497	55.2
Aug.	4,469,505	27,603	4,497,108	54.9
Sept.	4,125,379	17,763	4,125,379	52.0
Oct.	4,472,615	38,204	4,510,819	55.0

Steel Castings Shipments

(Bureau of Census)

	(Short Tons) Total	For Sale	For Own Use
1951	2,101,604	1,507,413	594,191
1952	1,925,116	1,476,352	448,767
1953	1,829,277	1,290,016	431,330
1954	1,184,096	880,158	303,938
1955	1,530,694	1,166,706	363,988
1956	1,931,987	1,512,290	416,697
1957			
Total	1,766,191	1,261,301	406,444
1958			
July	68,802	48,618	10,184
Aug.	80,886	59,816	21,070
Sept.	85,277	64,586	20,691
Oct.	95,389	73,367	22,022
Nov.	85,267	65,788	19,479
Dec.	103,800	81,360	22,440
Total	1,114,939	859,125	255,814
1959			
Jan.	105,392	82,693	22,709
Feb.	110,280	86,013	24,267
Mar.	131,317	103,848	27,469
Apr.	134,344	104,890	29,454
May	135,359	105,804	29,555
June	143,624	111,725	31,899
July	106,790	83,541	23,249
Aug.	98,014	79,188	18,826
Sept.	99,731	79,963	19,768
Oct.	105,570	84,850	20,720
Nov.	109,460	86,026	23,434
Dec.	103,800	81,360	23,440
Total	1,023,861	919,181	294,430
1960			
Jan.	122,565	94,052	28,513
Feb.	129,259	97,927	31,332
Mar.	143,708	109,688	34,020
Apr.	127,219	96,557	30,662
May	126,580	97,231	29,349
June	136,992	107,076	29,916
July	89,565	67,924	22,271
Aug.	101,709	77,146	24,563

Galvanized Sheet Shipments

(American Iron & Steel Institute)
(Net Tons)

	1957	1958	1959	1960
Jan.	235,902	186,649	279,244	323,073
Feb.	205,048	167,627	281,637	289,583
Mar.	206,836	195,885	311,961	329,395
Apr.	198,585	206,368	328,759	295,627
May	206,657	231,318	317,059	288,162
June	239,037	277,180	350,333	275,974
July	167,247	239,883	180,787	239,036
Aug.	186,790	253,263	N.A.	227,983
Sept.	183,952	258,723	N.A.	215,356
Oct.	212,886	290,157	N.A.	
Nov.	190,380	253,909	196,644	
Dec.	159,368	286,472	301,911	
Total	2,392,637	2,828,848	2,772,835	

N.A.—Not available.

SHIPMENTS OF TIN-TERNEPLATE

(American Iron & Steel Institute)
(Net Tons)

	—Hot Dipped— 1959	1960	—Electrolytic— 1959	1960
Jan.	30,304	32,525	417,210	493,828
Feb.	24,602	29,385	442,625	443,619
Mar.	46,705	38,131	597,408	538,166
Apr.	54,906	37,106	689,998	470,716
May	64,110	37,705	689,064	473,083
June	62,965	51,810	673,819	548,198
July	36,381	42,074	244,719	489,080
Aug.	N.A.	38,599	N.A.	472,209
Sept.	N.A.	28,610	N.A.	356,036
Oct.	N.A.	....	N.A.	....
Nov.	21,782	....	296,641	....
Dec.	31,487	....	464,080	....
Total	412,123	....	4,858,511	....

N.A.—Not available.

Steel Ingot Operations

(Precentage of Capacity as Reported by American Iron & Steel Institute)

Week Beginning	1957	1958	1959	1960
Jan. 4...	98.4	56.1	76.2	95.3
Jan. 11...	96.4	57.0	73.6	95.7
Jan. 18...	96.6	55.5	74.6	95.4
Jan. 25...	97.6	54.0	72.6	94.2
Feb. 1...	97.1	54.0	76.9	94.3
Feb. 8...	97.7	53.5	83.8	95.7
Feb. 15...	97.8	50.9	83.7	93.8
Feb. 22...	96.0	54.6	88.5	94.4
Feb. 29...	97.1	53.1	90.3	92.8
Mar. 7...	93.8	52.4	92.0	93.1
Mar. 14...	93.5	52.5	92.9	91.5
Mar. 21...	92.4	50.6	92.9	91.1
Mar. 28...	90.6	48.6	93.2	88.7
Apr. 4...	90.3	48.5	93.3	84.8
Apr. 11...	90.4	46.8	93.8	78.1
Apr. 18...	88.7	47.9	93.5	78.5
Apr. 25...	87.0	47.8	94.2	77.6
May 2...	86.7	49.4	92.0	75.0
May 9...	84.2	52.3	92.9	73.8
May 16...	86.4	56.4	93.4	71.3
May 23...	88.0	58.1	93.6	65.6
May 30...	87.5	62.5	93.7	60.6
June 6...	86.5	84.0	92.0	61.6
June 13...	85.2	64.9	92.5	62.3
June 20...	84.0	61.7	87.8	61.0
June 27...	78.5	51.0	78.2	53.0
July 4...	78.7	53.4	79.5	42.2
July 11...	79.3	54.9	38.7	51.8
July 18...	79.4	57.3	12.9	54.4
July 25...	79.4	57.8	12.2	53.3
Aug. 1...	79.8	58.8	11.2	53.9
Aug. 8...	80.6	60.5	11.8	53.5
Aug. 15...	82.1	62.6	11.3	54.7
Aug. 22...	82.2	63.5	11.7	54.3
Aug. 29...	81.0	61.7	11.5	52.0
Sept. 5...	81.9	65.9	11.6	49.2
Sept. 12...	82.1	65.6	12.6	53.0
Sept. 19...	82.2	67.3	12.8	54.3
Sept. 26...	82.6	70.4	12.8	54.7
Oct. 3...	82.8	71.6	12.8	53.4
Oct. 10...	80.9	74.2	13.0	55.4
Oct. 17...	80.2	74.8	13.1	55.4
Oct. 24...	79.7	75.0	13.1	51.7
Oct. 31...	78.0	74.5	13.0	51.9
Nov. 7...	77.7	74.5	45.6	51.5
Nov. 14...	76.0	74.1	78.9	...
Nov. 21...	72.1	73.7	89.7	...
Nov. 28...	71.5	73.5	93.6	...
Dec. 5...	69.2	73.5	96.5	...
Dec. 12...	67.7	74.5	96.3	...
Dec. 19...	53.7	74.5	94.9	...
Dec. 26...	59.0	73.6	96.3	...

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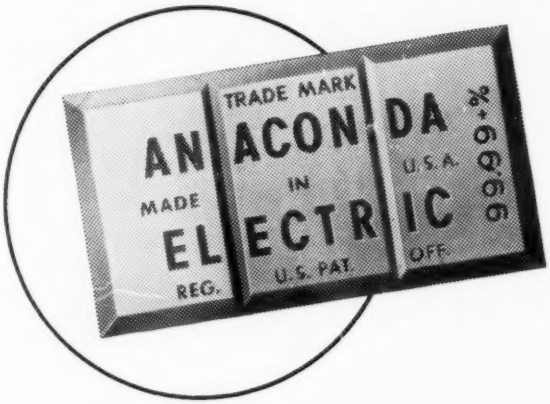

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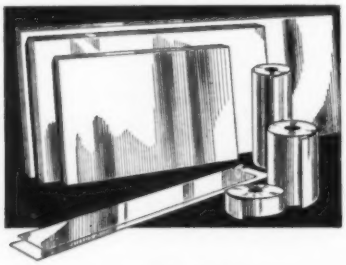

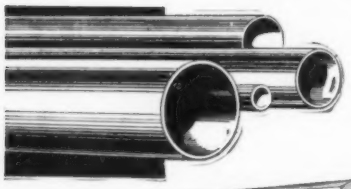

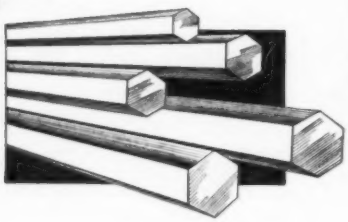

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